OPHTHALMOLOGY

ORAL HISTORY SERIES

A Link With Our Past

An Interview with

DuPont Guerry III, MD

OPHTHALMOLOGY

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A Link With Our Past

DuPont Guerry III, MD
c. 1987

DuPont Guerry III, MD

Ophthalmologist, Richmond, Virginia and the Medical College of Virginia

An Interview Conducted by
Sally Smith Hughes, PhD, 1989–1990

With Introductions by
Joseph C. Robert, PhD
Robert N. Shaffer, MD

The Foundation of the American Academy of Ophthalmology, San Francisco
Regional Oral History Office, University of California at Berkeley

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American Board of Ophthalmology, 1970-1978; chairman, 1979, president, 1984-1985, American Ophthalmological Society; president, Virginia Society of Ophthalmology and Otolaryngology, 1966-1967; member, editorial board, *American Journal of Ophthalmology*, 1965-1981; member, Knapp Fund Committee, 1972-present; member, board of visitors, University of Virginia, 1974-1982; DuPont Guerry Annual Lectureship, Medical College of Virginia; DuPont Guerry Professorship of Ophthalmology, University of Virginia; Howe Medal, 1987; discussion on medical care for blacks at MCV in the 1940s; research on retrolental fibroplasia; relaxation and hobbies: reading, tennis, golf, travel, painting, volunteer work. Introductions by Joseph C. Robert, PhD, and Robert N. Shaffer, MD.

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CONTENTS

PREFACE

Ophthalmology Oral History Series

American ophthalmology has undergone striking changes since World War II, not only in terms of basic science, diagnosis, and therapy, but also in terms of its internal organization and relationship with the rest of medicine and with the federal and state governments. Aware of the need to document these changes, the Foundation of the American Academy of Ophthalmology sought a means to preserve the memories, experiences, and insights of individuals who had lived through them.

The result was the inauguration in 1986 of the Ophthalmology Oral History Series, an ongoing series of in-depth interviews with senior ophthalmologists and others who have made significant contributions to the specialty. Aside from providing enjoyment and inspiration, the series' intent is to preserve a fund of historical information which might otherwise be lost and to give ophthalmologists a sense of their discipline's heritage.

In January 1986, an Oral Histories Committee, consisting of William H. Spencer, MD (chairman), Stanley M. Truhlsen, MD, Susan E. Cronenwett, Patricia I. Meagher, and David J. Noonan, was formed to facilitate collection of the oral histories. A selection subcommittee, with an anonymous membership of three senior ophthalmologists, was appointed to select individuals to be interviewed from nominations by the Foundation Board of Trustees and the Academy Board of Directors.

In selecting individuals to be interviewed, the subcommittee considers the individual's age, prominence in and contributions to ophthalmology, and ability and motivation to participate in the project. An effort is made to select interviewees from different areas of the country and with different subspecialty interests. Colleagues in the interviewee's geographic region provide information and assist in fund raising for the oral history series, which is entirely supported by private contributions.

Production of the oral histories is a collaborative effort of the Regional Oral History Office of the University of California at Berkeley and the Ophthalmic Heritage Department of the Foundation of the American Academy of Ophthalmology. For over thirty years the Regional Oral History Office has conducted interviews with West Coast leaders in all walks of life and is pleased to have the opportunity to expand nationally to

document the history of American ophthalmology. Sally Smith Hughes, PhD, a medical historian with the Regional Oral History Office, conducts the research, interviewing, and editing, and confers with the Foundation on final production of the oral history volumes. Willa K. Baum, director of the Regional Oral History Office, serves as consultant. Licia Wells, director of the Foundation's Department of Ophthalmic Heritage, is responsible for the management and administration of the series.

An oral history memoir is a recorded and transcribed series of interviews designed to preserve the recollections, knowledge, and reactions of a person who has played a significant role in or observed important events. It represents an important way to preserve information and opinions that the narrator alone is able to provide. The transcriptions are edited, reviewed by the narrator, retyped, indexed, and bound with photographs and illustrative material, and placed in appropriate research libraries.

The finished product is both a record of a conversation and a primary research source. It should not be regarded as having the polish and finality of a published book. It is not intended to present the final, verified, and complete account of events. Rather, it reflects the narrator's view, sometimes recounted with partisanship and passion, sometimes with impartiality and objectivity, but always vivid, immediate, and irreplaceable.

Oral history in one sense is an informal art, one that relies on the give and take between two individuals holding a directed conversation. Thus the reader should not expect a studied, impersonal, and invariably exhaustive and factual discourse in the pages that follow. Instead, good oral history offers a view of the narrator and his opinions up close, expressed with the immediacy, appeal, and occasional errors and distortions of everyday conversation.

Indexed and bound transcripts of the interviews are available to readers at the Foundation of the American Academy of Ophthalmology, the Bancroft Library, the National Library of Medicine, and other medical and manuscript libraries. The interview tapes and supplementary material relevant to each interview are on deposit at the Foundation. Oral history volumes may be ordered from the Foundation.

Sally Smith Hughes, PhD
Senior Interviewer-Editor
Regional Oral History Office
University of California, Berkeley

William H. Spencer, MD
Oral Histories Committee
The Foundation of the
American Academy of
Ophthalmology

Revised, June 1992

INTRODUCTION

Joseph C. Robert, PhD

In composing this brief prefatory statement to the oral history of DuPont Guerry III, I enjoy a special freedom, the reward of admitting that objectivity is here impossible and that medical science continues to be a mystery to me. The reader no doubt senses that I am one of DuPont Guerry's long-time friends and a former patient who somehow has survived both his jesting and his prescriptions.

Use your imagination to join me in a waiting room on Richmond's famous Monument Avenue, a room full of restless, glum-faced patients. The doctor is unavoidably late. Suddenly, a small noise comes from behind the office door. The name of a severe-looking dowager (100% "Old Richmond") is called. At the office door, she is greeted by the doctor with a pat on the shoulder and the greeting, "Come in, Your Highness." The frost melts, the long wait is blotted out of her mind; she now has the undivided attention of her favorite physician.

Such was a typical maneuver. His patients loved him, he loved them. The trademark of his practice throughout the years has been this inevitable humor, the effervescent spirit. His wit is improvised and natural, not programmed.

In trying to list the dynamic elements in DuPont's makeup that insured success, one might add the following to his social magnetism already mentioned: an iron determination made more effective by an almost unnatural patience in the face of temporary setbacks; a broad compassion ranging from personal sympathy to social conscience; and an eye blind to social strata—through his ophthalmoscope, prince and pauper look the same.

DuPont was fortunate in his birthplace, Greenville, South Carolina, a lively, small city blending the spirit of the old South with the new. And he was even more fortunate in the quality of his parents, whom I was privileged to know. The father, DuPont, Jr., a merry man, a gregarious Rotarian, and an astute, widely known electrical contractor, proved understanding as he talked with his son and often took him hunting and fishing. Mother Ola was an effective mixture of tenderness and "tough love"; lessons *must* be learned and the boy *must* do his best. Her

disappointment when young DuPont was only number two in his high school graduating class was softened when the same lad was the number one graduate at both Furman University and the Medical School of the University of Virginia.

Like many a student of "The" University, as the friends of the University of Virginia like to call it, he became infected by the *virus jeffersonian* from which he has never recovered. Witness his later service on the board of visitors and the establishment of the DuPont Guerry Professorship in Ophthalmology at the institution.

In Charlottesville, DuPont did many clever things, none smarter than his convincing Sally Kennon Williams, at that time a technician in the medical school, to marry him. This partnership is a major clue to the dynamics of the Guerry story, both professional and domestic. A graduate of Randolph-Macon Women's College, Sally is well trained, articulate, gracious, and crisply organized.

Born in the South, both DuPont and Sally had early absorbed the best elements of a complex regional tradition, often obscured by caricature. If one attempted analysis of this heritage, one might first recognize good manners, an unwavering courtesy. Next, he would probably list a sense of family solidarity, bordering on clan adhesiveness. It was a legacy to be passed along to another generation.

In a professional sense, it took five years for DuPont and Sally to travel the sixty-eight miles from Charlottesville to Richmond, Virginia. The detour by way of New York City for DuPont's residency was doubly rewarding, for beyond the medical training there were cultural opportunities all about them. It was as though they were consciously trying to avoid the tunnel vision handicap that often threatens the busy specialist.

DuPont was conspicuously successful in carrying forward all phases of his internship, this despite occasional illness. Especially persistent were allergies that caused his rejection by army, navy, and merchant marine when he attempted to enlist for service in World War II. His exercise of perseverance when confronted by health problems strengthened an already tough makeup.

Friendships became wider and deeper. Perhaps the most important individual in this larger circle was Dr. John H. Dunnington, a warm and patient counselor, born in Prince Edward County, Virginia and educated at Hampden-Sydney College (AB) and the University of Virginia (MD). With encouragement from Dr. Dunnington and other close friends, DuPont on completing his internship decided to settle in Richmond. A major reason for this choice was that going to any one of the other cities under consideration involved partnerships, and he was determined to "run his own show." In effect, he did this. His practice in Richmond covered the years 1944 to 1988.

Out of the office, DuPont involved himself with family, church, and a variety of recreational activities, many family oriented. His involvement, with even more emphasis, continues after retirement. When it comes to hospitality and general concern, Sally and DuPont expand the definition of family both vertically and horizontally. At the heart are four children—three sons and one daughter— with their partners and offspring. The grandchildren number eleven. Among knowledgeable friends, Sally is known as the "human glue," always working to hold the now spread-out family together. All four children and the one son-in-law have earned the MD degree. Almost certainly, the explanation is not parental pressure, but paternal imitation.

Sally and DuPont are active in St. Stephen's Episcopal Church. She was chosen as the first female senior warden in the congregation; for several years, he served on the vestry. Their early and generous support of the church-affiliated retirement home, Westminster Canterbury House, includes a novel project, the Large Print Book Fair, recognized by the American Academy of Ophthalmology.

DuPont especially enjoys fishing and tennis. He fishes in his little pond over in Goochland County, just twenty minutes from home, and all around Block Island, off Point Judith, Rhode Island, where the family has a vacation house.

The game of tennis, DuPont's prime hobby, evolved from a somewhat casual escape from the tensions of laboratory and clinic to become an important enterprise of its own in which he exhibits those very characteristics of determination and equilibrium under temporary setbacks that insured progress in his profession. On the court, he is quick in movement; there is more finesse than unusual power in his strokes; he places the ball well and he has learned to anticipate the actions of his opponents before they begin their return. His friendly personality makes the professionals want to help, as does his readiness by repeated practice at odd hours, to mend a weakness when fault is pointed out. And his teachers like his obvious enjoyment of the game. When someone near the courts was heard to marvel that a person so slight in build—five feet eight inches in height, one-hundred forty pounds in weight—could do so well in the game of tennis, the proper rejoinder was "Giants come in all sizes." Yes, as the following pages suggest, DuPont Guerry *is* a giant in his chosen fields.

Kennon Guerry, the middle son, said to me in beautiful, unrehearsed simplicity, "My dad is everything a good doctor should be." No man could want a better tribute.

INTRODUCTION

Robert N. Shaffer, MD

DuPont Guerry III, MD is a role model for all that is good and honorable in American ophthalmology. He has given freely of his time and talent to all aspects of ophthalmology. For forty-five years, DuPont has been training young ophthalmologists at the Medical College of Virginia where he served as professor and chairman for twenty years. I am particularly indebted to him for sending me two of his superbly trained residents, Dunbar Hoskins and Chris Dickens, who served first as glaucoma fellows and now are my partners in private practice.

Scientifically, DuPont's bright and inquiring mind became involved in many areas of ophthalmology, such as intraocular lenses, photocoagulation, and lasers. He was in the forefront of these technological developments years before such modalities became accepted in general practice. Professionally, DuPont took excellent care of patients in the clinic and in private practice. He is beloved by all who know him for his kindness, good humor, honesty, and skill.

My friendship with DuPont was based initially on a mutual interest in glaucoma and an intense devotion to tennis, which has been maintained for some forty years despite the barrier of a continent lying between Richmond and San Francisco. We attended meetings and were officers of national ophthalmic organizations such as the American Academy of Ophthalmology and the American Ophthalmological Society. Here, we would diligently attend the scientific sessions and then hurriedly change into tennis gear and play as long as possible. As in his professional life, DuPont was a complete and perfect gentleman, but underneath his kindness was a killer instinct. I always tried to play with rather than against DuPont. We have had some great matches. He is still playing excellent tennis on the over-eighty circuit.

For years, DuPont and I met at the yearly meetings of the American Academy and the American Ophthalmological Society. By 1970, we both were directors of the American Board of Ophthalmology, which met at least four times a year. By that time, the examinations were no longer held in university eye clinics, but in hotels, usually in Philadelphia or San Francisco. The examinations were time-consuming and demanding. To help the staff administer the examinations, our wives, Sally and Virginia,

and several other directors' wives volunteered their services. They directed the candidates to their waiting and examination rooms and in general administered psychotherapy to these nervous young doctors. Sally and Virginia became close friends, further cementing the bond between our families. Our family has stayed at the Guerrys' beautiful woodland home outside Richmond and has enjoyed windblown vacations at their summer home on Block Island off the coast of Rhode Island.

DuPont was a considerate and fair examiner who was respected by all. He seemed to know all the associate examiners. I envied his ability to welcome each new arrival with his infectious "Hi, old friend," whether he knew the candidate or not. Mary and Rita Ladden, the two administrators of the board, greatly appreciated his steady good humor and wise approaches to problems which were always arising in board business. The Laddens remember his plaintive complaint of overwork, "I am just working my pinkies to the bone." We all became close friends. Occasionally, when the many details of the examination could be completed early, the six of us would take a short vacation together at some charming place such as Mendocino or the Napa Valley.

In closing, I can only thank DuPont Guerry for his many important contributions to ophthalmology and especially for his valued friendship, which means so much to Virginia and me. I thank him for upholding the best ethical traditions of medicine. He has well served his patients, his residents, and ophthalmology. I am fortunate to be included among his many friends.

INTERVIEW HISTORY

Sally S. Hughes, PhD

This oral history of DuPont Guerry III is the seventh in the Ophthalmology Oral History Series, which consists of comprehensive biographies of individuals who have made major contributions to American ophthalmology. For the first time in this series, the focus is on the South and the achievements of a South Carolinian whose professional career was centered in Richmond, Virginia.

Here, as chairman of the Department of Ophthalmology at the Medical College of Virginia, Dr. Guerry transformed a moribund enterprise into a thriving clinical and research department. He also conducted pioneering research on the use of photocoagulation for the treatment of retinal detachment and other eye conditions, and on the development and clinical use of early models of the intraocular lens. All the while, he maintained a busy and respected private ophthalmological practice in Richmond.

In the oral history, Dr. Guerry tells of his upbringing in Greenville, South Carolina as the only son of an electrical engineer. Plagued by childhood allergies, he nonetheless maintained a sterling academic record throughout his undergraduate years at Furman University in Greenville and later at the University of Virginia Medical School in Charlottesville.

Persuaded by a mentor to specialize in otolaryngology, he completed a residency at Manhattan Eye, Ear, and Throat Infirmary only to discover his disaffection with the field. Undaunted, he immediately began a residency at Columbia's Institute of Ophthalmology, which at the time counted an astounding number of luminaries among its faculty. Here, the eager young southerner strengthened his lifelong interest in research, stimulated by his association with such giants as Arnold Knapp, Phillips Thygeson, Ramon Castroviejo, and Ludwig von Sallmann.

After completing his training, Dr. Guerry, his wife, Sally, and their first-born son settled in Richmond where subsequently as chairman from 1953 to 1973, he took up the challenge of upgrading the department and participating in the revitalization of the Medical College of Virginia.

One theme of these interviews is the importance of basic and clinical research. The rewards came early. As an intern at the University of Virginia, Dr. Guerry made what he considers to be his greatest scientific

contribution: the discovery of the role of vitamin K in hemorrhagic disease of the newborn. This work brought him the John Horseley Memorial Prize from the University of Virginia and coverage in *McCall's* magazine.

Of particular interest to ophthalmologists is the affiliation between the departments of ophthalmology and medical physics at the Medical College of Virginia, the latter chaired by William T. Ham, Jr., PhD, an expert on the physics of light. Dr. Guerry tells how their collaboration on radiation effects on the eye led to their association with Gerd Meyer-Schwickerath, the developer of photocoagulation apparatus and techniques. Because of this association, Dr. Guerry and his group in late 1956 or early 1957 (the exact date is unclear) were the first in the United States to receive a Zeiss xenon photocoagulator and to apply it clinically.

Another of Dr. Guerry's eclectic research interests was the intraocular lens, which after a period of experimentation, he began to insert in patients in the late 1950s, placing him among the vanguard of such work in this country. Not surprisingly, the results with these primitive lenses were poor, necessitating their removal over time. With skepticism born of this experience, Dr. Guerry remained a spectator as the field began to flower with the subsequent introduction of improved lenses.

Another theme of the oral history is Dr. Guerry's delight in patient care. Asked what he enjoyed most in his professional career, he responded: "What I've always enjoyed more than any other thing is doing a good job in taking care of patients. . . . It warms my heart to realize that with the good Lord's help I have been an instrument in healing and in bringing joy to those individuals."

Oral History Process

In preparation for the oral history, eleven short interviews were taped in person and ten by telephone with colleagues and friends of Dr. Guerry: John C. Barber, MD; Frederick C. Blodi, MD; Bernard Blythe; Leonard Christensen, MD; Kenneth R. Crispell, MD; James G. Ferguson, MD; Andrew P. Ferry, MD; Clement Haynsworth, LLD; William T. Ham, Jr., PhD; H. Dunbar Hoskins, MD; Thomas P. Kearns, MD; Clement McCulloch, MD; Keith W. McNeer, MD; Samuel D. McPherson, MD; Edgar Norris; Edward W.D. Norton, MD; Robert N. Shaffer, MD; Bradley R. Straatsma, MD; Joseph A.C. Wadsworth, MD; and Herbert Wiesinger, MD. (The tapes of these interviews and those of Dr. Guerry are on deposit at the Foundation of the American Academy of Ophthalmology.) In many cases, these individuals supplied information unobtainable from the written record, thereby allowing me to formulate questions which enriched the content of the interviews. I am very grateful to all of them.

Seven interviews were recorded with Dr. Guerry, the first three in Sausalito in the San Francisco Bay Area where he and his wife, Sally, were

visiting their youngest son and family. Four additional interviews were recorded at the Guerry home overlooking the James River outside Richmond. I wish to give them special thanks for their generosity and warm companionship in the week spent in their household. There, I experienced the legendary Richmond hospitality at its finest.

Edited transcripts of the interviews were mailed to Dr. Guerry, who in general edited lightly but in a few cases wrote extensive additions. The transcripts were retyped and sent to Dr. Guerry, who with Mrs. Guerry's able assistance, went over them a second time, making few and minor changes.

A unique aspect of this oral history is its setting in the American South. DuPont Guerry III in name, in diction, and in manner is the quintessential southern gentleman. What lies between the lines of the interviews is a very southern appreciation for gracious social interactions, for the immediacy of history, and for ethical behavior.

One hopes that the oral history also conveys a portrait of a man who happily and successfully balanced a diversity of interests: patient care, surgery, clinical research, academic responsibilities, and private practice, at the same time sustaining an extensive network of friends and relatives, playing a mean game of tennis on courts across the country, and proudly participating with his devoted wife in the lives of his four accomplished children.

September 1992

Regional Oral History Office
University of California
Berkeley, California

The Foundation of the American
Academy of Ophthalmology
San Francisco, California

OPHTHALMOLOGY ORAL HISTORY SERIES
BIOGRAPHICAL INFORMATION

(Please write clearly, don't type. Use black ink.)

Your full name Du Pont Guerry III

Date of birth Aug 16, 1912 Birthplace Greenville, S.C.

Father's full name Du Pont Guerry Jr.

Occupation Electrical Engineer Birth & Death dates Aug. 21, 1883 Dec 12 1974

Mother's full name Mary Ola Gregory

Occupation Mother - Housewife Birth & Death dates Jan. 21, 1887 Sept 15, 1980

Spouse's full name Sally Kennon Williams

Children's full name Du Pont Guerry IV, Richard Kennon Guerry, Mary Davenport Guerry (Tucker), Thomas LeGrand Guerry.

Where did you grow up? Greenville, S.C.

Present community Richmond, Va.

Education Furman Univ. - B.S. '34; Univ of Virginia, MD '38
(Undergraduate, Medical School, Internship, Residency)

Univ. of Virginia - internship '38-39; Manhattan Eye & Ear '39-41 E.N.T. resident
P. Med. Sc., Col. Univ. '44
Occupation(s) Retired ophthalmologist Institute of Ophthalmology, Presbyterian Hospital, N.Y.C. Ophthalmology resident 41-42

Areas of expertise Ophthalmology.

Other interests or activities Tennis, golf, painting, fishing, hunting, photography.

Active in which medical organizations? Am. Acad Opt., A.O.S., A.B.O. Am. Coll. Surg., Am. Med. Ass. Med. Soc. Va., Va. Soc. Opt., Pan-Am. Opt. Soc., Institute Barraquer, Ironsides Club, Med. Soc. Va., South. Med. Ass., Natl. & Va. Soc. Prevent. Medicine, Richmond Acad. Med.

Other organizations Country Club of Va, Deep Run Hunt Club, Black Island Club, Commonwealth Club, Colonnade Club (U. Va.) Huguenot Soc. S.C., St. Stephens Episcopal Church (former vestryman), S.C. Historical Society, Va Historical Society.

The interview process
The Guerry home outside Richmond, Virginia
April 1990

I. FAMILY BACKGROUND AND EDUCATION

Early Family History

[Interview 1: November 27, 1989, Sausalito, California]

Hughes: *Please tell me a little of your family history.*

Guerry: Well, I'll go way back to the beginning of our family in this country. We're descended from French Huguenots, as you might suspect from the name Guerry. The original name was spelled G-u-e-r-r-i. Our family was descended from Jacques and Anne Guerri of St. Seuret (today St. Sauvant) in the province of Poitou. Their son Pierre Guerri and his wife, Jeanne Broussard, came to this country after the repeal of the Edict of Nantes caused the Huguenots to flee. With a brief stopover in Dublin, Ireland, they settled in Charleston, South Carolina in 1696. All the Guerrys spell the name G-u-e-r-r-y now because we were Anglicized after about two generations. To my knowledge, all of the Guerrys in this country are descended from Pierre.

Guerry Grandparents

Guerry: Now, to skip a good many generations, my grandfather [DuPont Guerry] was born in 1848. At the time of the Civil War, he fought in the Battle of Atlanta at the age of sixteen. He and his brother went into the service at the same time, and his brother Thomas LeGrand—my son Thomas LeGrand is named for him—was about a year and a half older than DuPont, my grandfather.

My grandfather was turned down by the Confederacy at first because they said he was too small and too young, he being about fourteen and a half or fifteen at that time. But his older brother, LeGrand, was inducted into the Confederate forces and fought at Gettysburg and was killed at Gettysburg on his seventeenth birthday. He was with Cutt's Battalion in the artillery and had his upper arm shot off with a cannonball. He was operated on, on the battlefield, and he died shortly thereafter.

My grandfather fought in the Battle of Atlanta; he was sixteen at that time and old enough to serve. As you know, Sherman burned Atlanta, so our boys got out, the ones that could, and fast as they could. They went to Macon, which is about a hundred miles away, and on the way had several skirmishes thereabouts. By that time, things were pretty well coming apart. He and his company just melted into the civilian population and that was the end of Grandfather's military career.

Believe it or not, at the age of seventeen, he read law for a year or so and passed the bar at nineteen. He then went into the practice of law. He prospered and entered into several partnerships. Finally, at the ripe old age of twenty-nine, he married my grandmother, Mary Frances Davenport from Americus, Georgia. She was the daughter of a well-to-do merchant, an expatriate Virginian who had settled in Americus. They had four children, two boys and two girls, the youngest of whom was my father, DuPont, Jr. My grandfather was well respected by the bar and highly thought of because of his various civic enterprises. In 1906, he ran for governor, but unfortunately he ran on the temperance ticket and the whiskey people beat him. [laughs]

At that time, Wesleyan College—a Methodist girls' school in Macon, Georgia—was in dire need of a president to extricate it from the very difficult position that its previous president had put it in, so the board of visitors elected my grandfather president of Wesleyan College.

Hughes: What was the difficult position?

Guerry: The president had an affair with one of the teachers, and it got a bit sticky. [laughs]

Grandfather had been very much interested in the Methodist church at that time and was on the board of stewards of the Mulberry Methodist Church in Macon. He was pretty high up in the church hierarchy. They needed somebody to bring some semblance of order back to the institution, and they picked him.

He served as president for about eight years, or maybe ten, with great distinction.

The most interesting part of his administration as far as I am concerned is that he was responsible for bringing the Soong sisters from China to Macon. All three of them came to Wesleyan College, not together but separately, and two of them finished there. May-ling (Madame Chiang) did not, but the other two did and went north to further their education.* Grandpa kept in his own home Ail-ling, the first to arrive, until she became acclimated, because he feared she might be intimidated by the racial overtones of "the yellow peril." Ai-ling and Ching-ling were very close to him and to my father. As a matter of fact, my father tutored Madame Kung (Ai-ling) in mathematics when he was home on summer vacation. You see, they didn't have a summer vacation; they were there for the most part until they graduated. Madame Kung came back in the 1940s or 1950s and established a chair of history in honor of my grandfather.

Hughes: Did your father go to Wesleyan?

Guerry: No, that's a girls' school. As a matter of fact, he said he did, because he spent a lot of time there and he tutored a lot of the kids. He didn't meet my mother, Mary Ola Gregory, there, though. Grandpa left Wesleyan College and was appointed to the federal bench in Macon by Grover Cleveland, who was a personal friend of his.

Hughes: How had he gotten to know Cleveland?

Guerry: Grover Cleveland, as you know, was a Democrat. Everything was Democratic in those days in that area. Grandpa was one of the higher mucketymucks in the Georgia Democratic machine. So Grover appointed him a federal judge, and he remained a federal judge the rest of his life. He was noted for his silver-tongued oratory. Unfortunately, it didn't rub off on me. It wasn't a genetic trait.

Hughes: Had he been trained in oratory in school, or was that just a natural ability?

Guerry: My grandfather had only two years of formal schooling. Can you imagine? He was otherwise self-educated. His father, William Barnard Guerry, owned and ran the *Southeastern Gazette* at Americus, Georgia for about seven or eight years, up until the war began, and then he closed it down and went to war. That's

* May-ling later became Madame Chiang Kai-shek.

when my grandfather and his older brother went into the army. But my great-grandfather didn't think it was necessary to send Grandpa to school. He said, "I can teach you as much or more than they can." He was a learned man himself, so Grandpa only spent about two years in school, and his father really taught him. A right remarkable fellow.

Hughes: But he had studied the law in school?

Guerry: In those days most lawyers "read" law because there were so few law schools. As a matter of fact, a lot of our most famous politicians read law and didn't go to school.

My grandfather was killed in an automobile accident at the age of seventy and didn't have a grey hair on his head. He was still really at the height of his career, and it was a great loss not only for the family but for the rest of Macon and the state of Georgia.

Hughes: Did you know him?

Guerry: I knew him but not as much as I'd have liked to; I was only about five or six years old when he died. But I remember visiting in my grandparents' home in Macon. I remember particularly his taking me down to the local drugstore and buying me an ice cream cone (tutti frutti) every day and his bouncing me around on his knee and taking me fishing—also a few buggy rides in the country. He was a remarkable fellow, but he had more than a little temper. I guess that was his French ancestry. But he never vented it on me.

One day he was getting ready to shovel some coal into the fireplace. As he did, he inadvertently bumped his head on the corner of the mahogany mantelpiece. He had done it on several occasions, and this time he didn't say anything; he just went out and got a saw and sawed off the corner of the mantelpiece. [laughter] Nobody in the house ever made anything of this, and the mantelpiece remained cornerless from then on.

Hughes: Is it time to talk about your grandmother?

Guerry: Yes. My grandmother was from Americus, Georgia, and she had five sisters and a brother. Her name was Mary Frances (Fanny) Davenport, and as I think I've already mentioned, her father, Colonel W. T. Davenport, had come from Halifax County, Virginia, and settled down there. He was a colonel in the 86th Georgia Militia; after the war, he owned one of the big stores in town. My grandfather had been courting Miss Frances some several years, as they did in those days. Finally, they got married. She made a

great wife for him because she put up with the sawed-off corner of the mantelpiece and his various and sundry foibles. She was also good at rearing her children. By and large though, she kept pretty much to herself, and about the only time she indulged in politics was when she went to Washington to visit the president when she took Ai-ling Soong up. She left politics pretty much up to Grandpa.

Then I guess you want to know about my father.

Hughes: Yes, I certainly do.

Parents and Sisters

Guerry: My father [DuPont Guerry, Jr.] was an electrical engineer, and he got his schooling—as a matter of fact, he liked to talk about the number of schools he was thrown out of. [laughs] He started off at the University of Georgia, and he spent about a year there. That's when Grandpa ran for governor, and so he dropped out of school to run Grandpa's campaign. When Grandpa was defeated, Papa then went back to school, but he didn't go back to Georgia. He had decided by then that he wanted an electrical engineering degree, so he went to Georgia Tech.

He had a problem with Georgia Tech. He hadn't been there more than about four or five months when he was caught whistling in the wood shop. You know how loud the noise is in wood shops? In the middle of all this noise, the professor came over and tapped him on the shoulder and said, "Guerry, are you whistling?" He said, "As a matter of fact, I was." My father had his lips puckered up, but nobody could hear it. The professor said, "Well, that means you have to stay on campus for a week." My father said, "No, I don't have to. I don't like this place anyhow; I'm going somewhere else." [laughter]

When he went home and told Grandpa what had happened, he said, "You did exactly right. I'm going to send you to Auburn. It's a better school, anyhow." So Father went to Auburn and finished there in electrical engineering. He then worked for a year or so in research in Schenectady at General Electric with the renowned [Charles P.] Steinmetz.

Hughes: How do you suppose he became interested in electrical engineering?

Guerry: I have no idea. But one thing I do know, we had a very famous artist in our family named Albert Capers Guerry,* who did a lot of the portraits of people in Congress, state legislators, and numerous prominent southerners. Albert lived from 1840 until 1898, fought in the Civil War, and was married three times. He had some strange ideas and sort of a vicious temper. He was a bit cranky, as a lot of artists are. He'd be painting along and doing something really good, and he'd get real mad at himself about something, and he wouldn't just paint over it, he'd take a knife out and slash the whole thing. He was real temperamental.

One day, Grandfather asked my father, "Well, son, have you made up your mind yet what you're going to do?" And Papa said, "Yes, I think I'll be an artist." Grandpa said, "Well, I can tell you that's one thing you're not going to be. We've got one damn fool artist in the family now; we sure don't need any more." And yet Papa had talent. He did a lot of drawings, and I think he would have been a good artist. [laughter]

Hughes: Did that temper get passed down any further?

Guerry: Well, I've got a bit of a temper myself.

Hughes: I'll be careful. [laughter]

Guerry: After his stint with Steinmetz, Dad moved to Greenville, South Carolina and went in with J. E. Sirrine Company. It was one of the big engineering firms in the South at that time. He was working under a cousin George Wrigley in the electrical engineering department. He worked with Cousin George for about two years. Three years before this, a young fellow named Roger Huntington had come down from New York to Greenville and established an electrical firm whose purpose was wiring cotton mills. He and Father got to know each other. Roger invited him to become a partner, and they established the Huntington and Guerry Electrical Corporation. This became one of the largest and most prestigious electrical firms in the South. During the First World War, they wired Camp Sevier and various cotton mills too numerous to mention. The company motto was "Trouble-Proof."

The biggest job they ever had was wiring Duke University. Mr. [James Buchanan] Duke gave a tremendous sum of money, and Trinity [College] and was made into Duke University with it. Papa and Roger wired that whole campus. It was about an eight-year job. During the Second World War, there wasn't much

* See *South Carolina Historical Magazine* 91(3), July 1990, pp. 171–194.

civilian business. They wired mini aircraft carriers down in Pascagoula, Mississippi, for the Ingalls Shipyard. You know those small aircraft carriers that they'd send out to shepherd the merchant fleets?

Hughes: What was he like as a personality?

Guerry: He was a most jovial person with a great sense of humor, and he enjoyed life more than anybody I've ever known. I don't think he was ever despondent or upset or worried about anything. During the depths of the Depression, when we didn't know where the next meal was coming from, he'd come home and get a full night's sleep and next day be on the go with a "Well, let's see what today will bring." [laughter] "I'll go out and see if the basketeria will let us have some food," and he'd call at the office to see if there was any work to be done. So he was a remarkable fellow. He loved to fish and that helped us during the Depression. He was a great raconteur too, and he loved being around people, and they loved being with him. He was a great Rotarian, was president of the Greenville Rotary Club, and attended a lot of international meetings.

Hughes: Did you fish with him?

Guerry: Yes, I did. We did a lot of fishing and hunting together. He was a great father, and I could always depend on him. If ever I had a problem, I didn't hide it. I'd go in and discuss it. He pretty well saw my side of it.

Hughes: Did you ever consider going into the family business?

Guerry: As a matter of fact, he wanted me to go into the business. He wanted to send me to MIT, after I got through Furman, to become an electrical engineer. One day when I had made up my mind I wanted to go into medicine, I came in and told him. He said, "You know what, son? I think that's a very bright decision. You always were a lousy mathematician." [laughter] He was never upset about it.

Hughes: Well, what about your mother?

Guerry: Mother was a remarkable person—an extremely bright, well-adjusted, well-educated southern lady with a mind like a steel trap. I think I owe a lot to her in getting my education, because Dad was not the sort of fellow that would push his son around and make him study. Mother did. She saw that I did my

homework, and if I was having problems, she'd sit down and talk about them.

Hughes: Where was your mother educated?

Guerry: Mother went through Greenville Women's College, which is presently Furman University. Mother was an educated person and she had traveled a lot. She'd been to Europe a couple of times, which was unusual in those days.

Hughes: Before she was married?

Guerry: Yes, while she was in college. She was also a superb pianist, although she was never interested in a musical career. Her mother died very early of tuberculosis, and her father, Howell Jackson Gregory, Jr., died when she was about ten years old. She was brought up by her uncle Thurlow Gregory, who lived in Lancaster, South Carolina. While not wealthy, they were what you would call well-to-do people. Uncle Thurlow had nine kids of his own, and then he took in his brother's three kids. They never sat down to a meal with fewer than twenty people. Can you imagine that? Also, Uncle Thurlow saw that all of his children and his brother's children received a college education. He was mayor of Lancaster for many years.

My mother's father and Uncle Thurlow were in the livery stable business, but both were educated men. They educated each other. Thurlow would send his brother to school, and his brother would send him to school, and they worked like that until they both got a college education. The two of them were in partnership in this livery stable business and in real estate until Howell's death. Howell got pneumonia in St. Louis when he was buying mules for the livery stable, and he died there. A special train on the Lancaster and Chester Railroad brought his body from Chester to Lancaster for burial.

I had twin sisters, Mary and Harriet. Harriet died at the age of about a year and a half during the First World War. I remember her death as though it just happened. She had pyelitis, a terrible disease for children in those days. Our cousin Laura Easterby was also ill with pyelitis at the same time, but she survived. An eminent Johns Hopkins pediatrician who was stationed at Camp Sevier treated them. But really, the only treatment available was "forcing fluids." Today, antibiotics would almost certainly have effected a cure.

My sister was a bright child and did well in public school. She went to Wesleyan College in Macon and graduated with honors.

The year I interned at the University of Virginia, she went to University of Virginia summer school. There she met Carl Sharpe, a Dartmouth student, and they were married a year or so later. They had two children. Unfortunately, at the age of forty, she died an untimely death from acute hepatitis.

Family Life

Hughes: What was it like to grow up in your family's home?

Guerry: We had a good family life. My sister and I got along fine; we didn't have any real problems. We enjoyed reading and the usual things that you do in a family.

Hughes: Did you go to school in Greenville?

Guerry: Yes. There were two school systems in Greenville. The city schools were excellent. They were as good as most private schools anywhere. But the ones in the Parker District outside the city limits where we lived were very poor, so my mother and father wanted me to go to the Greenville City Schools. They had to pay tuition, but that was normal. It was very difficult to get from one of these school systems into the other unless you had some pull.

Well luckily, the head of the Greenville City Schools was James L. Mann. He had taught my mother in Lancaster, South Carolina when he was head of the school system there. Mother just called Dr. Mann and said, "As an old friend, will you take my son and educate him, because I don't want him in the Parker District schools. I don't think he will get a good education there." He said, "Miss Ola, I'd do anything for you. He's in right now. All you have to do is pay the tuition." The tuition was something like four dollars a month—just amazing. I think I spent one day in the Parker School system, and that was enough.

Hughes: And your sister?

Guerry: She did the same thing.

Hughes: What were discussions like around the dining-room table?

Guerry: Many of them had to do with the day's events. We never had any great philosophical discussions, I must say in all honesty. But we did read a lot and we did discuss some of the things that we read. As older children, we spent many of our summers in camp. Camp

experiences were great and we looked forward to that. In our early teens, we would summer in the mountains or at the beach. In my late teens, I worked on Dad's electrical construction gangs.

I remember when the radio came in; that was a great thing. We used to sit around and listen to it. My father being in the electrical business, his company, Huntington and Guerry, had built its own broadcasting station. I've forgotten what the call letters were, but I think it was either the third or fourth broadcasting station in the South. When they finally got tired of it, they gave it to Furman University; Furman ran it for several years and let the permit lapse. If they had just kept it for another few years, it would have been a real bonanza.

When we got our first radio and listened to KDKA in Pittsburgh, it came in loud and clear. And I remember building a little crystal set. You couldn't get much on it, but I could get Daddy's station downtown, and I would carry it around—it was in a little wooden box—and let the kids in the neighborhood put on the earphones and listen to it. All of my friends thought it was just a miracle; most of them didn't have radios in those days.

Hughes: Was religion a part of life?

Guerry: Yes. Mother and Daddy were good church people. Daddy was a steward in the Buncombe Street Methodist Church. He was also a great Rotarian. He wouldn't actually buttonhole you or anything like that, but he was a jolly good fellow, and he thought a lot of his brother Rotarians, and they of him. Rotary International was a great institution and, no doubt about it, fostered a tremendous amount of local as well as international goodwill.

Hughes: So he was a community participant?

Guerry: Oh, yes, he did a lot of community work. He was on all kinds of charity boards. He was never a good public speaker, though, and he always regretted it because Grandfather had been such a wonderful orator. If it came to where he'd have to get up and make a speech, Dad wouldn't do it. But he would do all the behind-the-scenes work for getting these occasions together, and then he'd bring in somebody who was a good speaker to do the speaking for him.

Hughes: Was he involved in politics?

Guerry: He was never involved in politics. He said he'd had enough of that in getting Grandpa beat in the campaign for governor way back when. [laughs]

Hughes: What did your mother do outside of the house?

Guerry: Mother had some very dear close friends, and they spent a lot of time on the telephone. [laughter] I always thought that that was just Mother, but I've come to find out that women spend more time on the telephone than men do. She did a lot of things in the church, and she spent much of her time teaching or seeing that we were taught—both me and my sister. She was not mean or harsh, just firm. She saw that we got our lessons done, and we didn't go to bed until we did.

Hughes: Was she the disciplinarian of the family?

Guerry: She was the disciplinarian in the family. We could get by Daddy, and if we had a real problem where we were upset, we'd say, "Daddy, Mom's going to do so-and-so." "No, I'll speak to her and see if I can't mollify her." [laughter]

Hughes: And could he usually?

Guerry: Yes, he could.

Hughes: What was the house itself like?

Guerry: It was a great, big, white clapboard two-story house with a big porch, or piazza as it were, with columns. The porch extended around the front of the house and on either side. There were six rooms downstairs and four rooms upstairs, so plenty of space.

Hughes: Did you have any help?

Guerry: We always had help.

Hughes: That lived in?

Guerry: Yes. We always had either one or two maids and a yard man. So we were never without help. And we thought we were paying horrible wages in those days. You could get a maid for something like six dollars a week, and that was big money. We also had a part-time seamstress, Ella May Logan, who taught me how to sew. I think this helped me later on when I began to do surgery.

Childhood Illness

Guerry: The greatest helper that we ever had was in my own babyhood. I was really an invalid because I had terrible infantile eczema, which nowadays you'd call atopic dermatitis, one of these allergic-type things. If it hadn't been for my mammy, I don't know whether I would have gotten through it, because she used to keep me from scratching. She'd sit up all night and cuddle me to prevent that.

About the first three years of my life they didn't know whether I was going to make it; I was broken out all over. They never were sure what it was, but they thought it was due to cow's milk. Dad said we ruined every East Coast dermatologist's reputation, because they all said, "Well, they've done about all they can do for you at home. They've put you on goat's milk and put you on this and that. Try some aluminum mittens to keep him from scratching." I guess I just outgrew it.

Hughes: How old were you when you outgrew it?

Guerry: I was about three when all of a sudden it just disappeared, and then I didn't have much trouble except with asthma. Every time I'd get a bad upper respiratory infection, I would wheeze and turn blue and sit up all night eating cracked ice. The doctors didn't want to give me any adrenalin because they thought it might weaken my heart. So I'd just tough it out. And that's the reason I wasn't able to do much athletics in high school until I was operated on in my junior year.

I was the littlest boy in the class, and my wheezing was so bad if I took any exercise, even walking across the street, I'd have to sit down on one side, walk across the street, and then sit down again. So I had a miserable time with my health until Dr. James Wilkie Jervey, Sr. did a Caldwell-Luk operation on my right [maxillary] sinus, and I've never had any problem since. Cleared up just like that.

His son J.W. Jervey, Jr. was a well-trained ophthalmologist and a member of the American Ophthalmological Society (AOS). He was a close friend and invited me to join him in practicing ophthalmology when I finished my residency.

Grammar and High School

Hughes: Do you have any particular memories of grammar school?

Guerry: I remember going to Donaldson School, which was way across town. I would go from one school to another school because Dr. Mann would put me wherever they had a vacancy in a good school. He always saw that I had a place. He told Mother that he was going to send me where he thought I'd get the best education.

I went to Donaldson School in the fifth grade and had a teacher named Miss Stokes. She was one of the best teachers in the school system; I remember her very well. That year, I won the gold medal for scholarship, and it made a very dear friend of mine, Caroline Gower, mad because she thought she was going to win it [laughs]. Her parents did too, and when it was announced that I had won the gold medal, the Gowers were very upset. [laughs] My parents were very pleased.

Hughes: Did you always do well in school?

Guerry: I always did well. I remember I went through the whole of my third-year class without missing a word in spelling—until the last week, when I spelled "corn" c-o-r-n-d. [laughter] I got ninety-five instead of a hundred, and that just cracked Mother up; I mean, she was real upset because I should have done it perfectly. She was a real perfectionist, and a lot of my perfectionism comes from her. She felt that if you do it, you do it right, no ifs, ands, or buts.

Hughes: Did she run her household that way?

Guerry: She ran her household the same way, and she ran the maids and the yard man that way.

Hughes: High school was also in Greenville?

Guerry: Yes, right. It was like coming out of a cocoon when I had that Caldwell-Luk done. That was in the first part of my junior year, so I went through that whole year and my senior year emancipated from health problems, and I could do anything I wanted, without asthma. I didn't have any skin problems, and I could do as I liked. I still have some skin problems, but they are not anything I can't control.

Hughes: Did you immediately take up sports?

Guerry: Yes. I had tried tennis and golf in high school, but I never really was able to take enough exercise. I blossomed after that and did very well in college, particularly in golf. We had a good, solid golf team. Our number one man was Charlie McGee.

Hughes: In high school, were you showing interest in any particular subjects?

Guerry: I was more interested in scientific disciplines, but not necessarily mathematics. I was interested in chemistry and biology.

Hughes: And doing very well?

Guerry: I did very well in the sciences and I was also interested in English literature. I did a lot of reading and some writing. I wrote some for the newspaper, although I was never the editor, but I wrote some editorials. I did the same sort of thing at Furman. I was an editor there for *The Hornet.*

Hughes: What about extracurricular life in high school?

Guerry: We had our little clubs, which really didn't amount to anything.

Hughes: You mean social clubs?

Guerry: Just social clubs. But I never was particularly interested in that. I was interested in some of the little dancing groups that we had. That's how we got mixed up with girls. I was definitely interested in that. I never lost my interest in girls. [laughter]

Hughes: Did you have a steady girlfriend?

Guerry: I had several that I considered serious at the time.

Summer Jobs

Guerry: I had summer jobs on electrical gangs where I had some real interesting experiences.

Hughes: Through your father's business?

Guerry: Yes.

I'll never forget when I learned to climb poles. We were working out at the Poe Mill in Greenville, and it was hot as hell in the summertime. One particular day when the temperature was in the nineties, I had tried out a couple of poles and successfully

climbed up three or four feet. (You stick those spurs in the pole and climb.) I was real proud of myself and felt I was ready for the big time. There was an eighty-foot creosote pole, and the foreman said, "All right, Guerry, go ahead and climb that damn pole. You know how to climb now, don't you?" And I said, "Yes, sir!" So I climbed up about forty feet and he said, "All right, that's high enough now. Come on down." And I couldn't get down, because I didn't know how to stick my spurs in to get down. So I slid down and the creosote came all the way through my shirt and onto the skin. It ate all the skin off my chest [laughing]. Before I climbed any more, I learned how to put my spurs in. I was a good climber after that, with no more difficulties.

You can see how accidents happen. I remember one time we were working in a cotton mill, and I was lifting one of these two-inch conduits. I was walking one end up a ladder, and my buddy was walking the other end up. We got up just about to the ceiling, and there was one of these high-voltage lines that usually aren't indoors; usually voltage doesn't go over 220. This was up around a thousand volts and somehow or other, we pushed one of these wires with the conduit and the thing arced, and all this molten material splattered all around us. We threw that conduit down and jumped down from the ladders scared to death. I thought it had gotten us both.

I enjoyed working on these gangs. The men were real interesting to work with, hard workers, and proud of the job they did. They were also very loyal to my dad and Roger, and they thought the world of them. They used to call me "Doc" in those days, and even though I had never thought about medicine, somehow they just called me Doc.

Furman University, 1930–1934

Hughes: Was it always assumed that you were going to go on to college?

Guerry: Oh, yes. I think that was foreordained, but we didn't know how we were going to finance it. I was salutatorian of the senior class in high school, and that automatically carried with it a scholarship to Furman. It was a partial scholarship, but every little bit helped.

Daddy had been pretty well-to-do, and then when the Depression came he kept all of his work gangs going for about a year and a half to two years. They'd come to work and there wouldn't be any work to do. So they'd go home, but he was paying them. He

didn't pay them full price, but he paid them a living wage. He and Roger Huntington both did that same thing, and they depleted pretty much what capital they had. The lucky thing was that everybody else was in the same boat.

Mother and Dad thought seriously of sacrificing and sending me to one of the Ivy League schools, and I just told them, "I don't think we need to do that. We have a real good school right here." So that's what I did; I went to Furman and lived at home. [Judge] Clement [Haynsworth], Tom Furman, and Ed Norris, all these boys did the same thing. They were all in the same boat. We had very few people that went out of state during the Depression.

Hughes: You said you were salutatorian. Is that the same as valedictorian?

Guerry: No, salutatorian goes to the second-ranked student. We had a real smart girl that beat me by I think it was 0.1 percent of a point. [laughs] That tore Mother up. It really didn't bother me because she was a real smart girl and I hadn't studied as hard as she had. She deserved it; there was no question about that.

Hughes: When you entered Furman, did you know what you wanted to major in?

Guerry: I guess I was thinking then that I would probably go to MIT and become an electrical engineer and take over Dad's business.

Furman's History

Hughes: Could you give me a little of the history of Furman University?

Guerry: My old medical school roommate's (Tom Furman) great-grandfather was its founder. It was established as a Baptist institution. The Baptists in control at that time were extremely conservative fundamentalists, and we facetiously called them "hard shell" or "foot washers." Some of the older professors and many of the younger ones, though, were rather liberal. They were the leftists of the day but not really way out. They were not too happy with this smug religious atmosphere, strict as it was. They showed their unhappiness with the situation by teaching things that some of the high mucketymucks in the religious hierarchy didn't think should be taught.

I remember my old professor, Professor Alfred Taylor O'Dell, who was my favorite, would read Shakespeare with great relish and élan, and we all thought he was wonderful. Occasionally, he

would bring in little things that were thought by the ministerial students to be suggestive, what we would consider laughable now, because they weren't really all that bad. Laurence Poston, my French professor, was another bright young professor cut from the same cloth.

In my sophomore year, a couple of the more hidebound brethren thought that some of the younger members of the faculty were going too far in bringing this type of education to these young people. Certainly, they thought it was against certain biblical injunctions. It got to the point where a few of the professors—Professor O'Dell, Professor Poston, and several others—were brought before a council and accused of heresy.

I remember I had to testify for Professor O'Dell, and I told them that I didn't think he was a heretic at all and I didn't think that the things that he had said were all that bad. He was teaching Shakespeare, and if they didn't like Shakespeare they were silly, because everyone recognized Shakespeare as the great master. I also testified for Poston in the same vein. Naturally, my testimony did not sit well with the hard shell faculty element.

President [Benjamin] Geer realized he had a terrible problem on his hands, and he feared the school might lose its accreditation. He got some of the smart people higher up in the Baptist community to come over and say, "Well, we just won't have any more of this sort of thing. We'll watch you a little more carefully, but we won't make anything more of this." As it turned out, everybody continued to do just as they'd done before and it was a tempest in a teapot. But it did show you how narrow some of these people could be.

Hughes: Was most of the student body Baptist?

Guerry: I would say probably over half of it was.

Hughes: Were there any obligatory religious ceremonies?

Guerry: No. I was a Methodist, and I continued to go to the Methodist church. We did have chapel exercises every morning, and, though not required to attend, we were urged to do so.

Furman really blossomed after they'd gotten all that foolishness settled and they got the Duke money. It's become a really good institution. In recent years, Francis Hipp (with Liberty Life Insurance) has given them a lot of money. As a matter of fact, I think somewhere in the last three or four years in somebody's poll, it was ranked number one of the small schools in the country for providing a good, solid education.

Hughes: Was it a liberal arts curriculum in those days?

Guerry: Yes. They had a law school for about eight years. A cousin of mine named Ned Gregory, one of those nine Gregory siblings that Mother lived with, graduated from the law school there. They turned out some very good lawyers. But for some reason or other, it just didn't seem the right way to go. They weren't going to be a big university, and it seemed silly to have a law school if they weren't going to have a medical school or other schools that would make them a real university.

Hughes: Do you know the story behind the Duke bequest?

Guerry: Mr. Geer was a great personal friend of Mr. Duke. When Mr. Duke started his transformation of Trinity College into Duke University, he put up I don't know how many millions of dollars. The Duke Foundation kicked in with a lot of dough for a lot of the other schools round and about, and Mr. Geer persuaded him to subsidize Furman. Duke was an extraordinary fellow with great educational foresight.

*Hughes: I was told it was in the second year you were there that Furman became affiliated with the Greenville Women's College.**

Guerry: That's right.

Hughes: Was that all part of the move to upgrade?

Guerry: Absolutely. The two schools were across town. (By the way, my aunt Estelle and my mother both graduated from Greenville Women's College.) Both schools were Baptist institutions, and there should have been just one. There was a lot of duplication of faculty, duplication of everything, so they just made it one institution. Then they moved out past where we lived into what we used to call country. They now have a beautiful campus with their own golf links and everything necessary to make them first rate.

Hughes: What was the enrollment when you were there?

Guerry: I would say somewhere between four and five hundred.

Hughes: So a hundred or so in your class.

Guerry: Yes.

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* Telephone interview with Bernard Blythe, November 15, 1989.

Undergraduate Life

Hughes: I know you were a fraternity member. Did most men belong in that era?*

Guerry: Yes, that's what most of us did who weren't ministerial students. Ministerial students didn't belong to fraternities; that was against their religion. We had a fair number who were subsidized by Baptist churches and who were there to become ministers.

Hughes: The fraternities were considered too wild?

Guerry: Oh, absolutely. They didn't want us and we didn't want them. It was a mutual disadmiration society. [laughter]

Hughes: Was there a lot of drinking and partying and good times?

Guerry: Well, we did our share. You know we had Prohibition in those days, but Prohibition really didn't amount to a whole lot, because we had all the mountain dew that you could drink anytime at reasonable prices. So, by and large, nearly everybody did a little bit. Some got into it pretty heavily, but none of my friends really went overboard.

Of course, drinking was strictly taboo. You would be thrown out of school if they caught you drinking. Every once in a while, they'd toss some poor sinner out and everybody would be pleading for his reinstatement. When this happened, one would usually be put on probation for a while.

Hughes: Did you have to be careful about drinking within the fraternity?

Guerry: Oh, yes, you had to be very careful. As a matter of fact, they were not very happy about our having fraternities. We had our fraternity room off campus. We did that for about three years and then they finally made us move back on campus, but that happened after I left.

Hughes: That off-campus status was to avoid university problems?

Guerry: Exactly. And dancing, too. If you wanted to have a dance, that was absolutely verboten.

Hughes: Kappa Alpha has a history of its own. Would you like to say something about it?

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* Telephone interview with Bernard Blythe, Clement Haynsworth, and Edgar Norris, November 15, 1989.

Guerry: Yes. It's a rather remarkable fraternity. Its fountainhead and the one that everybody considered the greatest southerner that ever lived was General Robert E. Lee. He was not the official founder, but he is considered our spiritual founder. He was president of Washington and Lee [University] at the time that this fraternity was founded.

I must say in all honesty that the fraternity has many good things about it. If you read its constitution, you will find we do a lot of good, helping good causes, both in school and in the community. We stand up for right and we don't believe in cheating and stealing. Our motto is *"Dieu et les Dames,"* God and the Women. [laughter] You can't beat that. Everybody considered General Lee to be the epitome of gentility, so to be a Kappa Alpha was to be a gentleman first and foremost. I must say, I think our brothers at IOTA Chapter fit this mold, because I really didn't know of any so-and-so's that belonged to the Kappa Alpha order. I was always proud of being a member, and in my senior year I was number one (ie, president). Looking back on it, it was a great thing at the time, and it added tremendously to my college experience. I still contribute to them.

Hughes: Are there chapters outside the South?

Guerry: No. There is a Kappa Alpha Northern, but its members are very wealthy northern boys with no southern traditions or things in common with us. There were some feelers put out to see if they might work out an amalgamation, but it never came to anything. The northern members couldn't give a hoot about who General Lee was or what he had done, and we weren't particularly interested in what their tenets were.

Hughes: It sounds as though both at home and at school you were getting quite a dose of southern culture.

Guerry: Oh, no question about that.

Hughes: Do you think you felt more southern than anything else?

Guerry: I still feel that I'm a southerner.

Hughes: Do you think of yourself as a southerner as opposed to an American?

Guerry: No. I would say I'm an American first, but don't push me on that. [laughter] I feel very much as General Lee did when they offered him the command of the northern forces and he said he was first a Virginian. Southerners have always felt more that they were

not just southerners but South Carolinians or Virginians, depending on their native state. It was always said about North Carolina that it was the Valley of Humiliation between the two Peaks of Conceit (Virginia and South Carolina). [laughter]

College Peers

Hughes: Do you wish to say something about some of your illustrious college peers?

Guerry: Oh, yes. I think Charlie Townes is unquestionably the most notable one, having gotten the Nobel Prize for discovery of the maser principle, which is the forerunner of the laser. What he discovered didn't have to do with light per se, but it had to do with different waves. Then another chap came along and applied light to the maser principle.

Charlie was one of the brightest people that I've ever known, no question about that. We played in the band together. Everyone knew he was going to be a hotshot at something because he was such a great mathematician. He could solve most all of his problems in his head. You give him a problem, and he'd come out with the answer almost before you'd given him the problem.

Hughes: Any more college peers?

Guerry: Yes. Clement Haynsworth. It was a sad day for the country when he was denied a seat on the Supreme Court. He was made a federal judge by Eisenhower, and he did a splendid job on the court. He was nominated by Nixon for the Supreme Court. Anybody that got nominated at that time, the Democrats were out to get.

Clement was a strong enough candidate and was bright enough and made such a good appearance before the committee that the committee passed him without any problem at all. And then Birch Bayh was turned loose on him. The labor unions started venting their spleen and they claimed he was a racist, which he was not; I don't know anybody less racist than Clement. It was a legal lynching.

Hughes: How did this affect the judge himself?

Guerry: He took it like a man. In fact, he remained on the federal bench and made an enviable record.

Hughes: Do you want to say anything about the others?

Guerry: Well, let's get back to old Francis Hipp. He's one of the big insurance people in the country as president of Liberty Life, and he's done a lot for Furman and for Greenville. Great individual. He was a Kappa Alpha also. I used to have a few toddies with him in the old days and still consider him a good friend.

Hughes: Edgar Norris?

Guerry: Edgar Norris is one of the top brokers in the South, and Charlie McGee is an author. He's published several books, was professor of English at Clemson University, and is recognized as a bright chap who's done a lot in the teaching business.

Hughes: Bernard Blythe?

Guerry: Bernard was in the earth-moving machinery business. Did himself proud just doing a good, solid job as a vice-president in charge of foreign operations. If you feel low, just get Bernard in, and you immediately feel better.

Bernard and I had a tough time getting through high school. His father was a lawyer and my father was an electrical engineer and they were great friends. They spent a large part of their time keeping us in high school because we were into some kind of mischief all the time. I didn't say any of that before; we never got around to it. But Bernard and I were nearly always the instigators, and I'd have to sit in the superintendent's office until Miss George, our homeroom teacher, would let me come back in. [laughs]

Premedical Curriculum

Hughes: Were there any fields that were particularly strong at Furman in those days?

Guerry: I think our premed course was one of the best in the country due to Dayton Riddle, the chap who headed up the premed curriculum. He was largely responsible for my going into medicine. I was planning on getting mixed up in physics and going off into electrical engineering at MIT. Then in my junior year, I'd already taken zoology and I went into comparative anatomy. He was a most inspiring lecturer and just a super guy. He got me interested in medicine, and in the last half of my junior year and in my senior year, I was the head of the student laboratory, in charge of dissections. I was his student right-hand man.

Hughes: Was that position given to the best student?

Guerry: Yes. I got really interested in the sciences. He was interested in getting bright people into medicine. He had also inspired Tom Furman, who was a year ahead of me, and had steered him to the University of Virginia [Medical School]. I decided that's what I wanted to do.

Hughes: Did Mr. Riddle have a degree?

Guerry: Yes, but only a BS. The great sadness of his life was that he never got his doctorate. I guess he's probably one of the two or three great teachers that I was exposed to. He did so much for the university. He had completed all of his work for a PhD except for a thesis, and at the time that he submitted his thesis, somebody had written a thesis on the same sort of thing. He didn't know anything about the other fellow's work, which had been submitted a short time before his own. The university refused to accept the thesis, and he never got his degree. He never let it get him down though and continued to do a superb job of teaching and running his department.

Hughes: You didn't make the decision about premed until your junior year?

Guerry: Yes, but I had been taking all the sciences because I liked sciences. With the background I had, I could have gotten into any of the medical schools.

Hughes: Did you do any research as an undergraduate?

Guerry: Not really what you'd call basic research. We would have anatomical problems—comparative anatomy of the species and dissection—but I really never got into doing research. I was interested in it, but there really wasn't much occasion at Furman; they really didn't have the facilities for that sort of thing.

Hughes: Do you want to tell the story of the B in chemistry?

Guerry: Dr. George Alexander Buist was our professor of chemistry. I can't think of the guy's name now who was the lab assistant. I did very well in chemistry and old Buist gave me an A. But when it came down to the lab grade, this boy whose name I can't remember gave me a B, and his reason for giving me a B was that he just didn't think anybody ought to have all A's. [laughter]

Hughes: You didn't graduate first in the class because of the B?

Guerry: I did. It didn't make any difference because I was a tiny bit ahead of Boggs, even with the B. So I was valedictorian, but I didn't get the President's Cup. The reason I didn't get the President's Cup was because I wasn't a Baptist. Boggs was a Baptist; so even though I was valedictorian, he was given the President's Cup. [laughs]

That incensed my father. He went to Ben Geer and said, "Ben, you and I have been friends for a long time, but this is the damndest thing that I ever heard of. My son was valedictorian, but he didn't get the President's Cup because he wasn't a Baptist. You know that's not right." Ben said, "Well, DuPont, the group that made that decision is the group on the faculty that believes in rewarding the faithful." Meaning those of the Baptist faith. "There's nothing I can do about it, but I admit it's unfair."

Hughes: How did you feel about it?

Guerry: Well, I thought it was kind of a crappy way to act. It didn't really mean that much to me though, because I gave the valedictory address and everybody knew I was first in the class.

University of Virginia Medical School, 1934–1938

Hughes: Why did you decide to go to the University of Virginia Medical School?

Guerry: There were three real good reasons. One, my friend Tom [Furman] had gone there and loved it. Two, our old family doctor, Fletcher Jordan, the one who brought me into this world—I guess I am alive because of him. Apparently, I was a blue baby due to the cord around my neck. But Dr. Jordan was so skillful that he was able to disengage the cord and beat on my fanny hard enough to bring me around. He was a University of Virginia graduate and a very dear friend of the family, and also a close friend of Dean [J.C.] Flippin, dean of the University of Virginia Medical School. He very much wanted me to go to the University of Virginia. Then, the third reason was Dayton Riddle, my professor at Furman, who wanted me to go there.

Hughes: What was the reputation of the school?

Guerry: Well, we southerners always thought the University of Virginia was far and away the best school in the South, and I wanted to stay South. Afterwards, I found out that the dean was a cousin of my [future] wife, Sally.

Hughes: And you didn't realize that?

Guerry: I didn't know that at the time; I didn't know Sally even existed then. Dean Flippin was a great fellow with a great deal of presence.

But that's why I went to the University of Virginia. I never regretted it. I think the medical school was better than most, and today it's certainly in the first ten.

Faculty Members

Hughes: Were there other professors that you admired?

Guerry: We had some excellent professors. I was just thinking back on my first year. We had an extraordinary professor of anatomy, old Professor [William Bennet] Bean, whose son turned out to be a very great internist and professor of internal medicine at Iowa. We used to call his father the Baron. We got a lot of our faculty at the University of Virginia from the medical school in Peking, which had been subsidized and run by the Rockefellers. The Baron came to us from there, and so did Jim Cash, our professor of pathology. [Ludwig] von Sallmann, who came to the eye institute [at Columbia], was also from Peking. Then in my first year, I had the guy who succeeded Dean Flippin, Harvey Ernest Jordan, who was head of histology. He was one of the greatest lecturers of all time and had written a book on histology that we studied—one of the most decent human beings you ever saw. He was not an MD, but a PhD and a superb teacher. These were the people that taught me the most in my freshman year.

I can't think of anybody in my second year that I was particularly enamored of, but we had Professor [Tiffany] Williams in ob/gyn in my third year, and he was a great lecturer and teacher. I must say that in spite of his teaching, I never considered going into ob/gyn, because I didn't like the hours. [laughs] We had to go down to Norfolk and do home deliveries for three weeks in our junior year.

I'll never forget one time when I was on call for delivery and this woman had been in labor for fourteen hours. She was about eight centimeters dilated, and she just would not deliver. I was sitting there waiting for her. Finally, I got tired. There was another bed in the room so I went to sleep in it just at the time Tiffany came around to check on things. "What the hell's going on here?" And I said, "*Nothing*." [laughter] He said, "What do you mean, *nothing*?" I said, "She's eight centimeters dilated and has been like that for fourteen hours, and *nothing* is happening. I don't

know why you all don't do something about it." He said, "Well, I think we ought to do something. Let's take her to the delivery room and do something about it." So they took her to the delivery room, ruptured the membranes and did the delivery. But he always talked about, "Gentlemen, don't ever sleep in the bed next to your patient like one of you who shall be nameless did." I was a celebrity from then on because I was the only one who ever got caught sleeping on the job. [laughter] So I remember him very well. He was good to me and was never rancorous because of my dereliction.

Sally's cousin Dean Flippin was a real good teacher, especially on ward rounds. He could be very sarcastic. One day as we were making rounds on medicine, he was demonstrating auricular fibrillation, a cardiac abnormality. He called on Joe Yon, who was in the class ahead of me, and asked him to feel the patient's pulse and tell him what he felt. Joe did and he said, "Dr. Flippin, I think she's fibrillating a little bit." Whereupon Dr. Flippin replied, "What do you mean, sir, she's fibrillating a little bit? That's just like saying somebody is a little bit pregnant. You either are or aren't."

And then there was Oscar "Hosky" Swineford, who was one of the early allergists. I was very much interested in allergy because of my various and sundry allergies, and he used me as a guinea pig to demonstrate allergic reactions. As a matter of fact, Sally lived in his home with three other girls. They lived on the second floor, so Dr. Swineford and I saw a lot of each other and were good friends.

There was also my professor of otolaryngology, Fletcher Woodward, who really talked me into going into ENT. He was brilliant, one of the best ENT men in the country. He was nationally recognized and just a real fine fellow, one that you would like to emulate. In my senior year, he made me an extern in ENT and otolaryngology; this means that you could do various operations with somebody supervising you, things like tonsillectomies and simple surgery.

Hughes: But not every medical student did that?

Guerry: No. We had a professor of ophthalmology, Edward Burton, who was a nice chap and a good ophthalmologist, but a very poor teacher. He really didn't inspire you to nobler deeds.

This externship was a composite of eye, ear, nose, and throat, and you were on call both for eye and for ear, nose, and throat. ENT with Fletcher Woodward and his group was such an active service

that we were the envy of everybody else. Students ordinarily didn't do such things.

The Medical Fraternity

Hughes: Please tell me more about life in medical school.

Guerry: I was a member of Phi Beta Pi medical fraternity, and I lived in its house all four years. That was a glorious experience. I was with a great group of fellows, most of whom were in classes ahead of me. There were only two freshmen in the house; I was one, and the other was Phil Steptoe. All the rest were sophomores, juniors, or seniors. If you had a problem, you felt free to discuss it with any of the upper classmen. It was extraordinary how much the brothers wanted to see the younger men in the fraternity succeed. If you procrastinated or were of a mind not to study when you ought to, they'd come in and say, "Look, you ought to get on with it and get off your butt and get to work."

My friend Tom Furman was a wonderful fellow. I roomed with him. He was a sophomore. He'd just been through the freshman courses. He had one of the most extraordinary memories of anybody I've ever known. He could have been at the top of his class except for the fact that he was a little slow in getting things done. Everybody else would whiz through helter skelter but not Tom. He would study at his regular slow pace, but he would remember one-hundred percent of what he had studied; the last ten percent he never reached by quitting time. As a consequence, he made nineties on everything but wasn't in the running for top man in his class.

The top man in that class was my in-law Henry St. George Tucker, Jr., whose son married my daughter Mary. He was the number one man in that class, the class of '37, and was and is a prince of a fellow, a nationally recognized endocrinologist at the Medical College of Virginia, now retired. And I was the number one man in the class of '38.

Hughes: Did you have to study hard?

Guerry: Not real hard because I roomed with Tom. I would come home and I'd say, "We're going to have so-and-so tomorrow. He would say, "Well, that's page 232." He would delineate everything pertinent about that particular subject, all you needed to know. You didn't have to read the books. You just asked Tom, and he could tell you in about three minutes what the book had taken twenty minutes to say.

Hughes: Did you read the books?

Guerry: Oh, yes, I read the books, too, but I didn't have to read a lot of foolish stuff. Old Tom was a great coach. He was just a great fellow to room with, and he loved to pontificate and deliver these sermons on medicine. He should have been a professor, really.

Hughes: He didn't teach at a later date?

Guerry: Never did. He did general practice in Greenville, South Carolina, just the same thing his father had done. He was highly respected in Greenville. Whenever anybody had a tough case, even though Tom was a general practitioner, they'd always call him as a consultant. He was a great physician.

Vitamin K Research

Hughes: Did you have time for research?

Guerry: Yes. You had to make the time; it wasn't in the curriculum. I got interested in vitamin K not too long after Henrik Dam discovered it. By the way, he later got the Nobel Prize for this discovery. I was on pediatrics at the time, and we were having problems with newborns that bled spontaneously and one that bled to death. They had hemorrhagic disease of the newborn.

Thank God there weren't many of them, but there were enough to scare the hell out of you. Nobody knew in those days why they bled. When I read about Henrik Dam's work on vitamin K, I said to myself, "I bet, by golly, if you gave these babies vitamin K, this might solve the problem."

I talked to the associate professor of pediatrics, Willy [William Wirt] Waddell, and he said that didn't make any sense. "Don't mess with that and waste your time." I then went around and talked to Willy [William Edward] Bray, who was professor of laboratory and clinical medicine. I said, "Dr. Bray, I think that this vitamin K might help in these newborns that are bleeding to death. I think they must have high prothrombin times with low prothrombin in the blood. If you give them vitamin K and run the prothrombin times before and after giving them vitamin K, it should stop the bleeding—or better still, prevent it." He said, "Well, nobody knows what the prothrombin times on babies are." And I answered, "Well, I know that. Why don't we do some work on it?" "Okay," he said, "let's have a go at it. I'll try to get Willy Waddell to go along."

As luck would have it, at just that critical moment, a baby was brought in with severe bleeding, and I persuaded Dr. Waddell to let us give it vitamin K concentrate. This was given through a nipple; and within two to three hours, the bleeding had ceased. It was as though a miracle had occurred. Willy Waddell was so impressed that he allowed me to start doing prothrombin times on all our newborns.

You know how we got blood for prothrombin times in those days? We'd tap the fontanelles; stick one of those short little fontanelle needles in the superior fontanelle and bring out about two cc's of blood, because it took about that much to do a prothrombin time. Immediately, we found that some of these times were high and they were in the babies who had a tendency to bleed. After we had done prothrombin times in about sixty cases, Willy Bray with Orville Kelly, who was a classmate of mine, got the bright idea of working out a method to do a prothrombin time where you could prick the finger or heel and tell what the prothrombin concentrate was in a drop of blood rather than having to do a fontanelle tap with its possible complications. It was also a lot simpler.

Before Willy Bray developed his new method of prothrombin determination, we knew from our early data that many newborns have a prothrombin deficiency for the first five days postpartum. This is the interval when spontaneous bleeding takes place if the prothrombin time gets too high. After five days when a baby develops an intestinal flora, it manufactures its own vitamin K and the prothrombin concentration increases and prothrombin time goes down.

In the March 1939 issue of *Proceedings of the Society for Experimental Biology and Medicine*, we published the first article having to do with this problem, and in June of 1939, we published a definitive study. Six months later, we published an article which showed that giving vitamin K to the mother shortly before birth would prevent prothrombin deficiency.*

Interestingly enough, at about the same time that we published our first article, a group, I think from Iowa, published an article stating that prothrombin time in newborns was essentially the same as in adults. For some strange reason, they did not carry their study back to the first week postpartum and consequently

* Waddell WW, Guerry D, Bray WE, Kelley OR. Possible effects of vitamin K on prothrombin and clotting time in newly born infants. *Proc Soc Exp Biol Med* 1939;40:432–434; Waddell WW, Guerry D. Effect of vitamin K on clotting time of prothrombin and blood, with special reference on unnatural bleeding of newly-born. *J Am Med Assoc* 1939;112:2259–2263; Waddell WW, Guerry D, Birdsong M. Vitamin K: role in etiology, prevention, and treatment of hypothrombinemia and hemorrhagic disease of the newborn. *South Med J* 1939; 33:974–979.

missed the critical times when prothrombin times will be elevated.

Another interesting sidelight: while our first article was in press, Willy Bray went to a national meeting and presented some of our data there. During the happy hour after the scientific meeting, somebody filched some of Willy's data—we never knew who—and it was never published by the person or persons who made off with the data. Our data was published shortly thereafter, and until this day, we don't know who the guilty party was.

Hughes: Why is Waddell first author in your papers?

Guerry: Well, because he was the "professor." There's a lot of that going on, as you may or may not know. That's not my way, though, and the reason you find that I'm not chief author on a whole lot of papers. If it's my idea and I do the work or if it's my idea and I do some of the work, then I'm first; but if it's somebody else's idea or if it's my idea and somebody else does most of the work, I'll put him or her as senior author. My residents were all amazed at that because the old teutonic idea is the professor's name goes first no matter what.

Hughes: Was it fairly common in American medicine to have the professor be first author regardless of the work he'd done?

Guerry: Oh, yes. It's not universal, but it's common even today.

Hughes: Was the paper you published in the Journal of the American Medical Association *in 1939 just an extension of the previous work?*

Guerry: The first paper really was a preliminary study that said, "We think this, but we'll have a controlled study to follow," and the second paper is the controlled study that really proves that there was no question about it. That's the one where the stuff hit the fan, where everybody started doing it, when Waddell couldn't go to a meeting without everybody wanting to come around and talk to him. He didn't know our studies in depth, but he knew enough to get by. One good thing about him, though, he was a good basketball player back in the old days, and he played on our only undefeated basketball team.

Hughes: How did he handle the questions?

Guerry: Well, he knew enough about the data to give intelligent answers.

When I was given the John Horsley Memorial Prize for my work on the role of vitamin K in the etiology, prevention, and treatment of hypothrombinemia and the hemorrhagic disease of the newly born, it carried a stipend of $1,000. The prize is given yearly to the graduate of the University of Virginia Medical School who has been out less than five years and has done the most meritorious scientific work in medicine for the preceding year. I was in New York at Manhattan Eye and Ear Hospital at the time and came back to the university to get my prize.

Hughes: The idea of using vitamin K took off right away.

Guerry: Oh, it was all over the country. I got my picture in all the papers. *McCall's* had an article on it.* I was listed among men of the year of the state of Virginia by the *Richmond Times Dispatch.*

I was in New York by the time all this publicity came out. Everybody said, "Oh, yes, he's the guy who knows about that baby business." I never have done anything before or since to match that. Never will.

Hughes: Was the University of Virginia taking advantage of your discovery?

Guerry: Oh, yes, they got a lot of publicity out of it.

Hughes: Was there any problem in getting vitamin K in those days?

Guerry: No. We were able to get the concentrate from Abbott Laboratories.

It is interesting to follow the course of vitamin K development. Dam had used a crude extract made from alfalfa or hog liver in the early thirties in treating hemorrhagic disease in children. In the late thirties, Doisy and his group at St. Louis isolated pure vitamin K as a yellow oil.

The concentrate that we used was relatively potent; of course not as potent as the pure natural vitamin or its synthetic counterpart. We had no trouble administering the concentrate. We simply put the slightly brownish, gooey material in a nipple and let the baby have a go at it. It worked within an hour or so.

As a sidelight, it's interesting to note that vitamin K is formed in the human digestive system by bacterial action on ingested food but only if bile is present. That's because the vitamin is fat soluble. When a baby is born, if the mother has an ample supply, it is passed on to the baby and this will tide it over until the baby's intestinal flora is established, allowing the baby to

* Ratcliff JD. They need not die. *McCall's*, September 1940, p. 4.

manufacture its own vitamin K. It takes about six days for this to occur. The Jews knew about this and for that reason they learned not to do circumcision immediately after birth but rather after a week or so.

The drug companies were very good in working with us. They sent us all of the vitamin that we could use. We found out too that by giving it to the mother ahead of time, you wouldn't have to give it to the baby because the babies were born with enough to carry them through the critical period until the intestinal flora took over.

Hughes: So you gave vitamin K routinely?

Guerry: It's been given routinely ever since.

Hughes: Did getting the prize make a tangible difference in the way your career went?

Guerry: No, not really.

Hughes: How did the nomination for the prize occur?

Guerry: A faculty committee picks some young fellow that's done some exceptional work and one who hasn't been out more than five years. My work was received with the greatest acclaim and certainly the greatest publicity at that time—hence the prize. It was also especially appealing because it had to do with babies. We had to order more reprints because we just couldn't keep up with the requests.

Hughes: Well, anything else about the University of Virginia?

Guerry: There's so many good things about the University of Virginia; it's such a great institution, not just the medical school but the entire university. The general library and all the other general facilities were available to us. The faculty was also exceptionally good, as it is today. We would work with most of the members of the faculty, and they'd come in and chat with us on a one-to-one basis. We weren't segregated. We had to work hard, but we still had enough time to run around. There was camaraderie in the social fraternities too, not just in the medical fraternities. I had a lot more fun there than I did at Furman.

Hughes: This was the first time you had lived away from home.

Guerry: Sure, that had a lot to do with it.

One thing I neglected to say: during my rotating medical internship, before I went on ob/gyn, I was on the medical service. The chief resident was Julian Beckwith, a superb internist and a great human being. Working with him was a wonderful privilege and I learned more from him than any other single person. He was also a father confessor for me and one that I could unburden myself to. As long as he lived, he was my personal physician. Tragically, he developed a choroidal melanoma. I saw him in consultation and sent him to Bob Ellsworth at Presbyterian—this was after Al Reese's day—and they treated him with a cobalt plaque. The local melanoma was reduced to a healthy scar over time, but he had metastatic disease and died. I haven't had a personal physician since.

Internship, University of Virginia Hospital, 1938–1939

Hughes: Was your internship at the University of Virginia Hospital a rotating internship?

Guerry: Yes, it was rotating.

Hughes: What services?

Guerry: I went through internal medicine, pediatrics, dermatology, laboratory, and then we had a month on TB [tuberculosis] out at Blue Ridge Sanitorium. We really learned a lot about the chest out at the sanitorium.

Hughes: How did you treat patients?

Guerry: With pneumothorax, if they were bad enough off. You just put air in their chest and paralyzed the lung until it scarred in and healed. If the disease was mild, rest and a healthy diet were used. Of course, there were no drugs for the disease then.

Hughes: Any other particular memories of your internship year?

Guerry: Sally had a very interesting experience working in my senior year in the bacteriology laboratory with George Lawson, who was a professor of bacteriology and immunology. A real nice fellow. I think she enjoyed that. He allowed her to do a whole lot of interesting things.

I was in the process of writing a thesis, and we did the animal work in George's laboratory. It had to do with trying to determine whether the sulfa drugs were chemotherapeutic and attacked

bugs directly or merely inhibited the PMN [polymorphonuclear] response. What we did was inject rabbits intravenously with benzene, which would knock out the white cells, and see whether the sulfa drugs would then kill off the bugs. I never did publish it. I offered it to the Medical Society of South Carolina's publication, *The South Carolina Medical Gazette*, and the editor said it was one of the best papers he ever read, but it was too long and he didn't have room for it and it was too experimental, but he wished me well. [laughs]

Hughes: No suggestion about shortening it?

Guerry: No, and I didn't submit it anywhere else. Sally helped me with the rabbits, injecting them and doing hematological studies, blood counts, and so on.

Hughes: What year would that have been?

Guerry: That was my senior year. It was written in '37.

Hughes: That was pre-antibiotics. Was penicillin even dreamt of at that time?

Guerry: No. They had sulfonamides only, and they had just come out.

Hughes: You said you were trying to figure out whether the sulfas had chemotherapeutic action.

Guerry: Nobody knew for sure how a sulfa drug worked, whether it was a chemotherapeutic direct-acting thing or whether it actually stimulated the leukocytes to attack organisms.

Hughes: Was there actually that term—antibiotic—at that time?

Guerry: No. Penicillin had not been discovered.

Hughes: But you were thinking in those terms.

Guerry: Yes. Really, by and large, the sulfa drugs are chemotherapeutic, and my paper showed that. If the leukocytes weren't there, the sulfa would still work because it directly attacked the organism.

Hughes: Because it hits the bug itself.

Guerry: Yes, that's right.

It was good because we had to write a thesis to graduate, and I think I was the only one in my class that had a thesis based on original research.

Hughes: Wasn't it unusual to require a thesis for graduation?

Guerry: Yes. The university had done that for a long time though.

Hughes: Did most people write on a clinical subject?

Guerry: Yes, nearly everybody wrote on something clinical.

Hughes: Could you be kept from graduating if you didn't do an acceptable thesis?

Guerry: They would probably graduate you and tell you that you were a naughty boy, but they wanted you to do one. I'm sure they wouldn't have kept you from getting your degree.

Hughes: Was the aim to install the idea that publication was something that a doctor should consider?

Guerry: Yes, absolutely. That it was a part of medicine.

Hughes: It seems very forward thinking for the time.

Guerry: Yes, it was. We really had a rip-snorting little medical school there.

Jesse Beams

Hughes: Were there any professors that you met in your internship that you hadn't gotten to know during your medical schooling?

Guerry: [pause] Oh, there was one that I haven't mentioned, a chap named Ludwig who worked with Albert Chanutin in the Department of Biophysics, and they were working with the ultracentrifuge. As a matter of fact, they had gotten their ultracentrifuge from the physics professor in the college, Jesse Beams. He built a couple of ultracentrifuges for use in the Department of Biophysics. That was the instrument that the government used in the war to concentrate radioactive material. It worked like a cream separator. It separated the uranium isotopes. Well, old Jesse Beams was the physicist that developed that.

Hughes: Now, where was he?

Guerry: He was head of the Department of Physics at the University of Virginia, not in the medical school. He built a couple of those centrifuges for the medical people to use. Chanutin was using one for various and sundry purposes, and I talked to him about the possibility of concentrating the fluid for typing blood because we were having problems in those days getting strong enough typing material. We knew blood samples were often mistyped, and we needed to build up the titer so that there wouldn't be these failures. I had the idea that the protein in the blood serum that causes its segmentation could be spun down because of its high molecular weight, and then collected. And it worked.

The chap that I worked with was Ludwig. He was a real pleasant, affable German fellow and he'd say, "Vell, Doctor, ve going to spin them down today?" I'd say, "Well, if it suits you." "Vell, ve're not doing nothing else, so ve might as vell." [laughter] So we would put my material in there and we'd spin it down, and he said, "You can take it upstairs now and get the girls to check it for you." So I'd go up there and they'd check it, and sure enough, the stuff seemed to work. Ludwig and I decided we'd publish a paper on it, but we never got around to writing it up.

Hughes: So it was Jesse Beams that had the idea for the ultracentrifuge?

Guerry: He's the one, and he should have gotten the Nobel Prize for his work.

Hughes: I know from talking to some of your ex-residents that you had biophysics in your department at the Medical College of Virginia. Do you think that some of these early experiences gave you the idea that biophysics was important to medicine?

Guerry: No question about it. Bill Ham, my close friend and collaborator, was head of the Department of Biophysics at the Medical College of Virginia in Richmond. He was one of Jesse Beams's proteges. Jesse wanted to keep him at the University of Virginia, but the Medical College of Virginia offered him a job if he'd come down as a researcher in the Department of Surgery at the Medical College, and later to head up a Department of Biophysics. I was head of the Department of Ophthalmology when Bill Ham came to the Medical College of Virginia (not to be confused with the University of Virginia Medical School in Charlottesville) and began his work in biophysics.

Both of us were interested in the effect of light on the eye, and it was natural for us to collaborate. The Atomic Energy Commission [AEC] was interested in the various effects of atomic explosions on the eye, particularly after the Nevada explosions

and those at Nagasaki and Hiroshima. By the way, Bill Ham was present at the Nevada tests. When we were approached by the AEC in the late 1940s in regard to research on the least amount of energy needed to damage the retina, we readily accepted. Bill Ham and his team had already built an apparatus for doing such studies. Our collaboration has been a pleasant and fruitful one.

Hughes: The AEC, of course, was thinking of atomic explosions?

Guerry: Sure. We were funded by the Atomic Energy Commission and the air force, and we worked for both of them. To work in this field, we had to get Q clearance, I'll never forget. We weren't allowed to publish anything without the government looking at it and saying we could, because we were being paid by them. I had to get Q clearance to be sure that I was an American citizen and that I didn't have any devious motives, criminal record, or subversive foreign connections.

FBI agents went to Greenville to check on me. Clement Haynsworth called me up one day to say, "Damn it, DuPont, what have you done now?" I said, "What's the matter, Clement?" He said, "There's an FBI man down here, wants to know if you're a good boy or not. I told him some of your escapades in the old days, and I don't know whether you're going to get Q clearance or not." [laughter] They'd asked all my old classmates at Furman if I was an honorable fellow, and would I sell the government out, and other pertinent questions.

Hughes: And you somehow squeaked through and got clearance. [laughter]

Residency in Otolaryngology, Manhattan Eye, Ear, and Throat Hospital, 1939–1941

Hughes: Well, the next step is Manhattan Eye, Ear, and Throat Hospital.

Guerry: Fletcher Woodward got in touch with the powers that be at the Manhattan Eye and Ear, and they said that they would be happy to have me as a resident. So I went there. I enjoyed it, but it wasn't what I wanted to do; I knew that after I'd been there about a year. I did a lot of mastoidectomies and a tremendous number of tonsillectomies. When you were on the tonsil service, you had to do twenty tonsillectomies each afternoon for six months. I think I did two thousand tonsillectomies or more. And in muggy, hot weather, lots of them would bleed at night, and you'd be up all night stopping bleeders.

Hughes: Why did the weather have something to do with it?

Guerry: I don't know. Nobody believes that but me, but I'm sure that it does. It seemed as though every time the weather turned muggy, they bled.

Hughes: You didn't get very much sleep.

Guerry: Right. We did about a hundred tonsils a day, I guess. In retrospect, probably ten percent of them really needed to be done. Everybody thought that if you didn't get your tonsils out, you were doomed.

Hughes: They were not thought to have any purpose.

Guerry: No. Well, we know how they have a lot to do with your immunological system. They don't take them out nowadays except under specific circumstances.

Hughes: They were considered to harbor infections. Was that the usual reason for removal?

Guerry: Yes, that's right. It was said that if you kept your tonsils you'd have bad rheumatic fever. Of course, any strep infection, no matter where you had it, could give you rheumatic fever.

Hughes: So the tonsils really weren't the culprits.

Guerry: No, except in extraordinary circumstances.

Hughes: Were the residents given twenty cases because that was a practical number to get through in a day?

Guerry: Yes, that was our quota.

Hughes: Why do you suppose that Dr. Woodward chose Manhattan Eye and Ear?

Guerry: He thought it was about the best practical education one could get in otolaryngology.

There wasn't much research going on in otolaryngology anywhere at that time. I think I wrote one of the first papers to go out of Manhattan Eye and Ear. I wrote one on the local use of sulfanilamide after mastoidectomy to cut down on postoperative infection and speed up healing in the postoperative care of mastoid wounds. Nobody was doing any research. You see, Manhattan Eye and Ear wasn't associated with a teaching

hospital at that time. And one of the big reasons was that so many otolaryngological problems had to do with allergy, and nobody knew much about allergy.

We had an old fellow who was doing some allergy at that time and getting some pretty good results (I can't remember his name). There was no place for animal experimentation and no research labs, only clinical ones. I wanted to get into a specialty where I could do some basic as well as clinical research.

Hughes: There was no specialty in allergy in those days?

Guerry: It was just beginning to be recognized as a specialty.

Hughes: You said before that because of your own history, you were particularly interested in allergy. Do you think that was one of the reasons why you initially went into otolaryngology?

Guerry: No, I don't think it had to do with my going into nose and throat. I think it was purely that I thought I was going to be an otolaryngological surgeon and I wanted to emulate Fletcher Woodward, who was such a good surgeon.

Hughes: So you weren't thinking of research then?

Guerry: No, not really. My vitamin K research had started me, and I had some misgivings about ENT at Manhattan Eye and Ear with no promise of research. Staige Blackford, one of my professors of medicine, had said to me, "Guerry, a man with your talents is going to be perfectly miserable in a purely clinical environment." He was right, but I had accepted the residency and I gave it a shot.

Another reason I got disenchanted after I got up there was the fact that the sulfa drugs had just come in and they changed the whole complexion of ENT as a specialty. Most mastoid and sinus infections got well without surgery, and there was no real challenge. I saw the writing on the wall, and I didn't want to do tonsillectomies for the rest of my life. So I figured I ought to do something else.

Hayes Martin down at the Sloan Kettering Cancer Institute and Memorial Hospital was interested in me. He invited me to come down there. I worked with him about three weeks, and I said, "I hate to tell you, Hayes, but I'm a hypochondriac and I have all the diseases my patients do. I just can't sit around and fight cancer, thinking about these people all the time. And I don't see that you cure many." He said, "We don't cure many, but we try." I

said, "I just don't think I'm temperamentally suited." He said, "Well, I don't want you if you aren't." I said, "Well, we're still friends?" He said, "Yes, we're still friends. I think you made a real good decision because I don't think your makeup is such that you'd be happy in this environment."

Hughes: This was right after you had been at Manhattan?

Guerry: No, I was still there, but I was then determined to make a change.

Hughes: How did you like living in New York?

Guerry: I loved living in New York. It was wonderful in those days. Sally and I could go to the Met or we could go to a play for peanuts. There was always something going on. We had a ball. New York was really a great city in those days, and we loved every minute of it.

Sally Kennon Williams Guerry

Hughes: We've missed an important topic—marriage. [laughs] How and when did you meet your wife?

Guerry: When I was a junior in medical school, she had finished Randolph-Macon Women's College (RMWC) and was trying to make up her mind what to do. Dean Flippin at University of Virginia Medical School was a cousin of theirs, and her mother got in touch with him. Her father had died when she was twelve years old, and her mother, the supervisor of dormitories at Randolph-Macon Women's College, was trying to figure out what Sally should do for postgraduate work. Hence the call to Dean Flippin with the story that her daughter Sally had just finished with honors at RMWC, and did he have any kind of job that he thought might suit a young lady?

He said, "I've got the very thing. She ought to be a lab technician." He said he had a place for her with Dr. Bray, and if she were interested, to tell her to come over and he would introduce her to Dr. Bray and put her in the next class. Which he did. The lab technicians took laboratory and clinical medicine with the medical students. [laughs] First time I laid eyes on her, I thought, "Gee, she's some girl." And so, I started immediately making noises in that direction and was completely ignored. She wouldn't give me the time of day. She was dating some of the senior medical students, you see, and here I was just a lowly junior. And worse still, she was dating a couple of real

interesting fellows. One was Bill White, a big, tall, handsome fellow who later married the daughter of the dean of Furman University. Sally never was serious about him, I'm sure, but it bothered me. Finally, I brought her around to my way of thinking and we started going together regularly. We courted right heavily about half the junior year and the senior year, and then we got married the day after I graduated.

Hughes: Was it unusual in those days to be married in medical school?

Guerry: Oh, you didn't do it. If you did, chances were you would not get an appointment in one of the better residency programs. It was unbelievable. Nowadays nearly everybody's married by the time they get through medical school. Really, it could make a difference where you went.

Hughes: Did your wife keep working as a lab technician?

Guerry: Yes, she kept on with it for my internship year there, and then we went to New York. She had some interesting experiences working in several different laboratories. After about six months, she started working up at Columbia-Presbyterian Medical Center while I was still at Manhattan. She got a real good job with the professor of urology, George Cahill, a great doctor and human being. His son now is head of the Department of Diabetology at Harvard. He was certainly good to her and to me. During that interval she had to commute, but this wasn't too burdensome.

Hughes: Was New York the end of her career as a lab technician?

Guerry: Yes, because we had DuPont IV by that time, and she didn't work after that. As a matter of fact, the last year and a half at the eye institute, she didn't work because she was taking care of DuPont IV—we called him "Little Joe" because if number four comes up when you shoot craps, you call it Little Joe.

Presbyterian Hospital, Columbia University, New York, 1941–1944

Decision To Specialize in Ophthalmology

[Interview 2: November 29, 1989, Sausalito, California]

Hughes: Please tell me why you decided to go into ophthalmology.

Guerry: Well, as I told you, I was disenchanted with otolaryngology, and I looked around for something else that I might be interested in. My dear friend and old classmate from the University of Virginia, George Wise, was an eye resident at the Presbyterian Hospital, and we used to see a lot of each other. We were sitting around talking, and I told him about my disenchantment, that I had not been happy in nose and throat, that I'd talked to Hayes Martin at the cancer institute at Memorial Hospital, and they offered me a place down there which I had turned down. George said, "Why don't you look over our situation up at the eye institute [at Presbyterian Hospital]? Dr. [John H.] Dunnington's an old Virginian from the University of Virginia, and I think he might take kindly to you."

Some days later, I went up to Presbyterian and looked around, and it just struck me immediately: this is where I ought to be. Then the next question was, How do I go about getting in? So I chatted with Dr. Dunnington, and he said, "You go ahead and make an application, and we'll let our committee look at you. If we think this is a mutually agreeable thing, we'll put you on the staff." I did this and I was accepted. And I think that's the happiest thing that's come into my life, other than Sally.

Hughes: Do you think it was any particular advantage to have had that residency in otolaryngology?

Guerry: Oh, yes. I still use some of my old otolaryngological knowledge. There's no question about it that this was a very worthwhile experience. If I had to do it over, I wouldn't spend that much time in it though. The thing that I was disenchanted about in particular was that I had no research facilities, and I was interested in doing some research. At Manhattan, there was none of that; this was a purely clinical experience, and I wanted a mixture of both the clinical and research. This I could have at Presbyterian.

Hughes: Was there any particular reason that research was not being done in otolaryngology?

Guerry: No. I am sure at certain institutions there was some basic research; there had to be, but I wasn't part of the process, and consequently, none of it peeled off on me.

Hughes: And it wasn't happening at Manhattan Eye and Ear.

Guerry: It wasn't happening at Manhattan because we weren't even associated with a teaching institution.

Hughes: Had you been exposed to the eye program at Manhattan?

Guerry: I saw very little, perhaps a few cataracts, but the way that ophthalmology was taught and practiced there was purely clinical too. A lot of the clinical places at that time, such as New York Eye and Ear Infirmary, had very little basic research going on. I think I could have gone down there without any problem because I had a lot of friends on the staff, but they didn't have any basic research either.

The Institute of Ophthalmology

Guerry: There was a real good research program going on at the Institute of Ophthalmology at Presbyterian after Dr. [Phillips] Thygeson was recruited as head of research by [John M.] Wheeler shortly after he founded the institution.* Thygie, of course, was a bulldog for research.

Hughes: You realized that right away?

Guerry: From the very beginning. They also had Dr. von Sallmann, who came in shortly before I did, and Dr. [Alson E.] Braley, and Dr. [George K.] Smelser. There was also a brilliant chemist, Karl Meyer. His particular forte was with chemistry of vitreous humor. Karl was a bit paranoid. He was always worried about someone "stealing his thunder." I still remember the way he walked around the halls looking furtively and thinking all of us were going to rush in and pilfer his data. [laughter] Delightful chap, a brilliant fellow, and he really made some definite contributions. As far as I know, nobody "stole his thunder."

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* For more on the Institute of Ophthalmology at Columbia, see *Phillips Thygeson, MD: External Eye Disease and the Proctor Foundation*. Ophthalmology Oral History Series, A Link With Our Past. Interviews conducted by Sally Smith Hughes, PhD, The Foundation of the American Academy of Ophthalmology, San Francisco, and The Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1987.

Hughes: He was a PhD?

Guerry: He was a PhD.

Hughes: And a German?

Guerry: Yes.

Hughes: Perhaps you'd say something about the reputation of the institute.

John M. Wheeler

Guerry: I believe that at the time I began my residency at the Institute of Ophthalmology of the Presbyterian Hospital in the city of New York, it was probably the number one eye institute, both clinical and research-wise, in the world. When John Wheeler took that place over, he said, "I'm going to make this the best doggone institute in the world." And I think he succeeded. He recruited nothing but first-class people, and I think I was exposed to the best ophthalmological minds that were extant at the time.

Hughes: Dr. Wheeler himself was basically a clinical person, was he not?

Guerry: Absolutely, but he had a bent towards research, and he recognized good research. He realized that if you're going to have a really first-rate teaching institution, you've got to have a first-rate research team.

Hughes: How exactly did he found the institute, and how was it funded?

Guerry: John Wheeler was an extraordinary man with an international reputation. I guess you remember the story about his operating successfully on the King of Siam for cataracts. After that he had such a reputation that when he decided he wanted to develop an eye institute, he had no difficulty in getting it off the ground.

The prime mover for bringing such an institute to fruition really was Edward Harkness, who had been largely responsible for funding Presbyterian's uptown expansion. He had for some time been interested in an eye institute for Presbyterian and he felt strongly that John Wheeler was the man for the job. When Wheeler accepted Mr. Harkness's invitation, he was given carte blanche not only for building the institute but also for recruiting the personnel. One of Wheeler's stipulations, though, was that he would be allowed to continue to practice clinical ophthalmology but with the proviso that he would be salaried.

While the eye institute was abuilding, Wheeler was recruiting such people as Thygeson from Iowa, who headed up the research program, and [Ramon] Castroviejo from Chicago, who was doing pioneer work in corneal grafts. These and others who came later worked in the research area in Presbyterian.

A few years later, Dr. Arnold Knapp joined this lofty throng by incorporating his hospital, the Knapp Hospital, founded by his father Herman—Phil Knapp's grandfather—into the eye institute. And with Dr. Knapp, Ludwig von Sallmann and Osborn Perkins came aboard. By the time I got there in 1941, the institute was growing like wildfire with top-of-the-line facilities and a super clinical and research facility.

Hughes: Did you ever hear the story about Dr. Wheeler having his eye enucleated for melanoma?

Guerry: He'd been in Florida on vacation, and he realized suddenly that he couldn't see very well out of one of his eyes; I've forgotten which one it was. He decided he'd better do something right away, so he came straight back to New York and called Jack Dunnington, and he said, "Strangely enough, Jack, I've got a problem with my eye, and I don't know what it is. I'm worried about it. Why don't you take a look at it?" Jack examined it, and he said, "Well, I hate to tell you this, John. You've got a malignant melanoma, and we're going to have to take that eye out. Who do you want to do it?" Wheeler said, "I was afraid that was my problem. I hope you will enucleate the eye for me as I have all the confidence in the world in you." Jack said, "Well, how do you want to do it?" Wheeler said, "Well, I think I ought to come in under an assumed name and get the thing out." So he was admitted under an assumed name. Of course, everybody knew about it, but John Wheeler thought he had everybody fooled. So that's how he lost the eye.

After that, John Wheeler had a problem with depth perception, and he thought this was going to ruin his surgery. So he went down to the New York Eye and Ear Infirmary—what's the name of your cousin, Sally?

Mrs. Guerry: Beverly Kennon

Guerry: Beverly Kennon, who was a resident there, had been in a hunting accident when he was a kid and had lost the sight in one eye. Somebody told John that Bevo Kennon was a good surgeon, and that he had only one eye and no depth perception problems. He contacted Bevo, who showed Wheeler how to use parallax as a

substitute for binocularity. This worked fine, and Wheeler continued to operate in his exemplary fashion.

Arnold Knapp

Guerry: Dr. Knapp was still there when I first arrived. As a matter of fact, my introduction to the eye institute was interesting and had to do with Dr. Knapp. The first day I showed up for work, I walked in and there was this very handsome, elderly patrician sitting at a corneal microscope examining a patient in the little examining room just off the waiting room where you enter the institute from the garden door. Being a country boy from Virginia, I looked in there and thought this was really something, seeing this man at work. He glanced up and said, "Can I do anything for you?" And I said, "Yessuh, I guess you can. You might tell me what you're doing." He said, "Well, come on in. I'm Arnold Knapp. Do you know what this instrument is?" And I said, "Well, I know that it's a corneal microscope because I've seen those sort of things, but I really haven't spent any time with it and don't know how you use it." He said, "Well, come over here, let me show you how it works." He sat me down and we looked at the patient, and he told me what I was seeing. Several of the residents would come by, look in with awe, and turn around and kind of rush off. This went on for some time.

Later on at dinner that night, one of the residents came up to me and said, "Do you know who that guy was you were working with?" I said, "Sure, he's a fellow named Arnold Knapp." He said, "Well, do you know who he is?" [laughs] I said, "He's just Dr. Knapp. Sure is a nice fellow, though." He said, "Really? I can't understand how you got along like that because he's supposed to be a real tyrant and everybody's scared to death of him." I said, "Well, I've never seen a more kindly gentleman or one more interested in furthering a young fellow." He said, "Well, I don't know how you can explain that. You're just plain lucky, man. Either lucky or stupid. Take your choice." [laughter]

Dr. Knapp and I became fast friends, and from then on I saw a lot of him. When I finally got around to doing surgery, he would come in and criticize my technique and show me little things that I didn't learn from anybody else that were very helpful. He really had sort of a fatherly attitude toward me.

Hughes: Did you ever see his tyrannical side?

Guerry: Never did.

Hughes: He was mainly doing research when you knew him?

Guerry: At that age he would come up and look at the research. He would have an occasional patient, not a surgical case; he was not doing any surgery himself at that time.

Hughes: He was around for the whole time you were at the institute?

Guerry: He was around the whole time. In my last year, he would come into the operating room with me on several occasions. He would say, "When you're going to do this cataract, you won't rupture any capsule if you rest your little finger here and do it like this instead of trying to do it freehand." Well, nobody had ever told me that. As I worked with it, he would criticize my maneuvers but never in a demeaning fashion. So I saw a fair amount of him and appreciated all the help he gave me.

Controversy Over Cataract Extraction

Hughes: Speaking of cataract extraction, Dr. Thygeson said that there was a controversy between Dr. Knapp and Dr. Wheeler. One of them espoused the extracapsular method.*

Guerry: Dr. Wheeler was the extracap man, and Dr. Knapp was the intracapper.

Hughes: Was the controversy still going on when you were there?

Guerry: It was still going on, but the intracaps had won out by that time. Strangely enough, nowadays we're back doing the extracapsular operation, and the intracap is taboo—except in extraordinary circumstances. Things go in cycles like that. By the time that I got to surgery, the intracap was the way to go and that's what everybody learned to do. We would start out doing an extracap, and then when we were clever enough with our hands and with the instruments, we would graduate to the intracapsular operation.

Hughes: Why was the intracap considered more difficult?

Guerry: It's a much more delicate operation to get the lens in the capsule without rupturing it and without losing vitreous. Now we think we should leave the capsule because we now know it protects the vitreous and there's a lot less tendency for retinal problems afterwards.

Hughes: Was Dr. Wheeler still on the scene?

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* Ibid, pp. 71–72.

Guerry: No, Dr. Wheeler had died [1938] some several years before I got up there. He had a heart attack at his summer home and died shortly thereafter.

John H. Dunnington

Hughes: What was John Dunnington like as a personality?

Guerry: Jack was a sort of a genius, a child prodigy. He finished the University of Virginia when he was about sixteen or seventeen, and then went through medical school, and then to the New York Eye and Ear Infirmary at the tender age of twenty-two. He was recognized early as a brilliant clinician. He set up practice in New York, and when John Wheeler organized the institute, he brought Jack Dunnington up there to be with him in a partnership arrangement, I guess you'd call it. He was Wheeler's alter ego as long as John Wheeler lived. After his demise, Jack Dunnington took over along with Phil Thygeson as a dual head.

Hughes: Dunnington was a general ophthalmologist?

Guerry: Yes, but he was real good at motility problems and cataracts and glaucoma. He was as good a general ophthalmic surgeon as you had in those days.

Hughes: Was he liked?

Guerry: Yes. He was an easygoing, unassuming person, universally liked. I don't think I ever saw him really upset. He never flew off on tangents and never got enraged by anything that happened. He could be stern, but it was a pleasant sternness. He wouldn't come in and castigate you unmercifully for something, nor would he embarrass you with your confreres. Instead he'd say, "We don't do things that way. This is the way we do it around here." Did you ever see him upset?

Mrs. Guerry: No. Always fun and happy and easygoing.

Guerry: He was a great physician and a great gentleman. Posterity has not treated him as kindly as it should.

Hughes: Did he do any research?

Guerry: He didn't do any basic research, but he did some good, solid clinical research. He gave the Bowman Lecture in Britain, which is one of the most cherished honors in ophthalmology.

Sir Stewart Duke-Elder was in his prime at that time, and they were very close friends.

Hughes: Is it given on the basis of research?

Guerry: Not just research but outstanding contributions to ophthalmology, be they clinical, research, or a combination.

Appointment of Dual Directors

Hughes: Dr. Dunnington was director of the clinical aspect of the institute, and Dr. Thygeson was research director?

Guerry: That's exactly right. When Wheeler died, the board at Presbyterian appointed dual heads. The board in its great wisdom or unwisdom decided that's the way it was going to be.

Hughes: Was a dual head unusual in ophthalmology?

Guerry: I think it was very unusual. I don't remember that sort of a thing elsewhere.

Hughes: How did it work?

Guerry: Poorly. [laughter] As a matter of fact, it was not as bad as I sound. It worked all right, but I think it probably would not have lasted; but over the short haul, it probably worked fairly well from a pragmatic standpoint.

Hughes: Do you think the problem was due to personalities, or to the difficulty of having two people running one institute?

Guerry: Well, I think it's almost impossible to have two philosophies and two strong personalities like that. Neither of them was really an egomaniac, but each one had his own strengths and his own ideas that he felt very strongly about. At times, there was a grey zone where it was difficult to say who should make a decision. Occasionally, feathers were ruffled.

Hughes: Also, Dr. Thygeson was gone some of the time with his trachoma research, was he not?

Guerry: He was away a good bit of the time. Thygie was there the first year of my residency. You see, I worked six months in basic research with von Sallmann and I was actually only about six

months into the regular residency program when Thygie went off to the wars.*

Hughes: So you didn't know Dr. Thygeson very well?

Guerry: I was never real close to Thygie, but we got along well and respected each other. On the other hand, I was very close to Jack Dunnington.

The Basic Science Course

Hughes: Dr. Thygeson taught the microbiology component of the basic science course?

Guerry: Yes, along with Deborah Locatcher-Khorazo. As you know, Thygie was the number one external disease man in the world. It was a privilege to have had him as a teacher. He did a lot not only to ground us securely in external disease but to impress on us the love for basic research. He made me realize even more the value and love of basic research.

Hughes: Had you already taken that course?

Guerry: Yes, I took that, and then they farmed us out for motility. We had to go downtown at night and take that with Dr. [James Watson] White in his office.

Hughes: Because there was nobody in the institute who could teach motility?

Guerry: Dr. White was the number one man in the country at that time in motility, but Maynard Wheeler also gave us a great deal of help in this field.

Hughes: When you came to the institute, did you immediately start taking the basic science course?

Guerry: Yes, after I did my six months research on a Snyder Fund grant.

Hughes: What did your basic course consist of?

Guerry: Well, we had ophthalmic pharmacology, bacteriology, anatomy, histology, and physiological optics. Gus [Emil G.] Bethke taught us how to draw and that was one of the more interesting and unusual subjects that we had. I still can't draw, but he brought

* For more on the Institute of Ophthalmology at Columbia and Dr. Thygeson's wartime military service, see his oral history in this series.

out what little talent I had. [laughs] He was a great fellow to work with. Let's see, what else did we have? Photography and chemistry.

Hughes: Was Dr. Thygeson interested in photography?

Guerry: I don't think so, but they had a full-time photographer, Adolph Marfang. He taught us well in photography and also the relationship of photography to ophthalmology.

*Hughes: Dr. Thygeson talked about the impact of color photography on ophthalmology.**

Guerry: We were just beginning colored photography at that time. Most of our photographs were black and white. When color was needed, Gus Bethke made beautiful lifelike "works of art" type drawings.

Hughes: Did you use stereophotography?

Guerry: We had some stereoscopic stuff, yes, but this was in its infancy. And we had to take photographs of each other. I remember I took a real good photograph of Joe Wadsworth and he took a good one of me. It's the best photograph I ever had taken of me. It really flatters me. It made me almost look good. [laughter]

The Institute During World War II

Guerry: Speaking of Joe Wadsworth, he came to the institute just ahead of me and then he was taken by the air force. I didn't have to go into the military because nobody would touch me with a ten-foot pole due to my allergies. I tried to get in the army and the navy and the coast guard, and I even tried to get my cousin Edgar Paulin, who was Roosevelt's physician down at Warm Springs [Georgia], to help me get in. He said, "No, you don't need to be in. You're going to do yourself a disservice and you're going to do them a disservice. I can't help you do that. Just do what you're doing and realize you're serving your country. You'd be miserable and they'd be miserable with you." I said, "Well, they've all told me that they don't want me because they'd have to support me the rest of my life."

Hughes: So you accepted that finally?

Guerry: I did. Strangely enough, old Jim McGraw came to the institute at that time, and he was in for the same sort of thing. The

* Thygeson oral history, p. 187.

government wouldn't take him because he had chronic urticaria. His face was blown up all the time with some chronic allergy. At times, his eyes would swell shut and he couldn't even see to operate and those times we'd have to take over his service. When you've got those sorts of problems, the military is no place for you.

Hughes: Who left the department and the institute to go to war?

Guerry: Braley and Thygie.

Hughes: Now, Braley was a resident?

Guerry: No, Braley was not a resident.

Hughes: Oh, that's right. He had been at Iowa.

Guerry: Yes, and Thygie brought him in. He and Thygeson had done a lot of work together at Iowa in external diseases.* When Thygie left, von Sallmann took over. Braley stayed on for about another six months. Gordon Bruce and Gerry Devoe also left. By the way, after the war and after Dunnington retired as head of the institute, Gerry Devoe succeeded him.

Hughes: Was Dr. Braley doing research at the institute?

Guerry: Yes. At that time, they were working on what we called shipyard conjunctivitis, which is now known as EKC or epidemic keratoconjunctivitis. A PhD named Murray Sanders was working with Braley on that. Sanders came up with what was thought to be the causal agent but this turned out to be a false alarm. Later an adenovirus, no. 8, was found to be the culprit.

Hughes: [consults notes] There was an Eduard Gallardo.

Guerry: He was a bacteriologist. And Khorazo was a pathologist and also a bacteriologist.

Hughes: Was this interest in external disease largely due to Dr. Thygeson?

Guerry: Thygeson was the number one external disease man in the world; there wasn't any question about it. Probably still is.

Hughes: Which is why Dr. Wheeler had recruited him.

Guerry: Exactly.

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* For more on this subject, see Dr. Thygeson's oral history.

Hughes: He was a relatively young man and came to Columbia as a full professor.

Guerry: That's right. He wouldn't have come under any other circumstances; he was happily situated where he was at Iowa.

Hughes: Do you think his appointment as full professor caused any resentment?

Guerry: No, I don't think so at all. He really headed up the research effort and he was highly respected by the entire local, national, and international ophthalmic community.

Ramon Castroviejo and Manuel Uribe Troncoso

Guerry: Ramon Castroviejo, also known as Cassy, was one of our favorite people. He was an extraordinary individual and one of the cleverest ophthalmic surgeons there's ever been. He was not only a good surgeon but he wanted to be better. He would take movies in those days of his own surgeries so that he could sit down in the cool of the evening and criticize his own techniques. He did so much surgery that when he left the institute, he was probably the best technical surgeon there was. When I was there, he was doing very little research but he had done great research, clinical and basic, on corneal grafting and really should be considered the father of corneal grafting.

Hughes: Where had he been trained?

Guerry: He started in cataracts when he was sixteen years old in Spain. His father was a brilliant ophthalmologist over there. They didn't have any rules about when you could operate or who could operate, and his father taught him how to do cataract surgery. So he was doing cataracts and all sorts of intraocular surgery at a very tender age. Then he came to the United States. I think he was in Chicago when he was recruited to the eye institute in New York. The reason John Wheeler got him up there was he had been working on corneal grafts and he had developed his square graft. Even then he was generally recognized as being a pioneer in that field. John was looking for the best there was, so he got Ramon.

Then there was a Mexican named Troncoso. Have you ever heard of Uribe?

Hughes: Yes, and Castroviejo and Troncoso didn't get along.

Guerry: They didn't get along at all. They would holler at each other in Spanish. [laughter] One of them was old and the other one was young, and Cassy was sort of an upstart to Tronky. [laughs] They just didn't hit it off, and they both had a lot of that fiery Spanish blood. But strangely enough, they both respected each other. Troncoso had already made an international mark when Cassy was just coming up with his corneal graft. Troncoso wrote a book which was pretty well thought of at that time, having to do with ocular diseases in general.* He gave me a copy of it, by the way.

Hughes: Was he a pathologist?

Guerry: He did everything in ophthalmology. He did pathology and surgery, and pretty much everything else.

I remember he had one experiment going that was a real doozy. He had decided that there was a better way of developing a seton-type glaucoma operation. Various seton operations had been tried where you just make a slit into the anterior chamber under the conjunctiva and put some foreign material, a wick or something of the sort, in the anterior chamber with the hope that it would not heal and would continue to filter properly. He had the idea that if you made a seton out of magnesium and put it into the anterior chamber that the magnesium as it decomposed and the little bubbles of hydrogen that appeared would keep the wound open long enough to give lasting filtration.

There was a lab attendant whose name I can't remember. Troncoso was real deaf at the time, so this chap would make snide remarks where Troncoso couldn't read his lips. The lab attendant would come in and say, "Well, this looks like a damn beer joint with all that froth we got in here. What's the professor up to now?" [laughter] We would have a great deal of fun about this. As it turned out, the magnesium seton was not any great contribution. It caused so much irritation in the eyes that it was never tried on human beings.

Hughes: So this research was in animals?

Guerry: Yes, this was all in rabbits. But he was an extraordinary old fellow. He had some research funds; I don't know where they came from. But he had a lot of real good ideas that he tried out, and he worked almost up to the day of his demise [1959]. He lived to be ninety-four.

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* Troncoso MU. *Internal Diseases of the Eye and Atlas of Ophthalmology*. Philadelphia: FA Davis, 1950.

Hughes: Do you know why these men left their native countries?

Guerry: I guess they just wanted to come to America. Troncoso was from Mexico, a professor down there, and he was another one with a world-famous reputation that Wheeler had put on his staff. He was a pioneer in gonioscopy.

Hughes: I was wondering if the research opportunities were better in the United States.

Guerry: I think that unquestionably had something to do with both of them coming up here and that's why Wheeler recruited them.

I just want to mention another interesting facet or two about Castroviejo. He had a terrific number of South American connections. When the banana boats would land in New York City, they would disgorge a large number of wealthy patients who would come in to see the maestro. Whenever this large number of people began to dwindle, he would make another triumphal South American tour and go from nation to nation and be welcomed, by all of the high potentates down there. He would not only be welcomed but he would be given the key to the city. He was terribly upset because the only country in South America that had not given him the key to any of their cities was Brazil. He said, "I think I will not go back to Brazil because they have not given me the key to their cities." [laughter] We could always tell when Cassy was going back on tour. When the boats stopped delivering patients, then he'd make another tour, and that was good for another six or eight months [of operations].

They were remarkable people that came in, the wealthiest people of South America. As a matter of fact, the time that Cassy had his appendix taken out, I scrubbed with him, and he had about twelve cases on the schedule. We'd finished most of them, and he was having dreadful pain in the right lower quadrant. He says, "DuPont, take over. My side is killing me. I go now and get it operated." So he'd made his own diagnosis.

Sure enough, that's what he had. They took him up to the operating room and took his appendix out, and I finished the schedule. I think probably the total fortune of those I operated on was around a hundred million dollars. [laughter] They'd come all the way to New York to get operated on by the senior resident while Cassy was over there getting his appendix out. Well, I don't think we ever told them, because it came out all right. [laughs] Of course if I had encountered a problem, there were other attendings who could have taken over.

Hughes: Did they come to him with all kinds of eye problems?

Guerry: Mostly cataracts and corneal grafts.

Hughes: They were his specialties?

Guerry: That's right. He really was a great cataract surgeon—cataracts and corneas, probably fifty-fifty. It wasn't just patients from South America; they came from all over for him to do corneal grafts because he was really the most successful.

Hughes: Do you remember who had been doing that work before Castroviejo?

Guerry: I can't remember right now, but it had been pretty much unsuccessful. He was the one that put corneal grafts on the map. That's why Wheeler brought him to the institute.

It seems that some of the most dexterous ophthalmic surgeons in the world were and are Spaniards.

Hughes: Do you have any explanation for that?

Guerry: They're clever with their hands. Beautiful. Dexterous. I guess that's why they're such good bullfighters and most of them survive that. [laughter]

Hughes: Anything else you've thought of?

Guerry: I can't think of anything else. Can you, Sally?

Mrs. Guerry: At this particular moment I think of Humberto Escapini in El Salvador.

Guerry: He was with Castroviejo for three years. I wish he'd stayed here, because the last time I saw him he was in terrible shape, financially and otherwise. As a matter of fact, Bill Pico and his Puerto Rican group and South American friends who had so loved Castroviejo raised enough money to help them out down in El Salvador.

Mrs. Guerry: Well, they also helped him raise a million-dollar ransom for his son.

Guerry: His son was kidnapped by the Communists, and Escapini had to pay a million dollars in American money as ransom to get him

back. They were going to kill him. They did release him after that. Then they all got out and went to Miami until things quieted down, and his son is practicing in Miami now. But Humberto is back in El Salvador at the mercy of what's going on there. Great guy. He and Castroviejo were very close.

Other Members of the Institute

Hughes: There was another Wheeler, a Maynard Wheeler, who was a strabismus person.

Guerry: That's right. He was a delightful fellow. He was a very close friend and associate of Jack Dunnington. He was a very good teacher and a good squint man. He was president of the AOS on its hundredth anniversary. It was an extraordinary event for which Sir Stewart Duke-Elder came over and gave the Verhoeff lecture.

Hughes: Is there anything to say about Algernon Reese?

Guerry: I don't think I have anything much to say about Algernon except that he was a great guy. He was at the height of his career probably the number one eye pathologist in the world, and he got his own book out.* He was also an excellent surgeon. He did all kinds of general ophthalmic surgery and was especially recognized for orbital surgery. If anybody had a case with obscure pathology, Al would be called in for an opinion. He was also a great diagnostician. As a consultant down at [Sloan Kettering] Memorial [Hospital], he did a whole lot of tumor consulting. He and Purty Stout, who was a tumor pathologist at Presbyterian, did a lot of work together. They had great respect for each other.

Hughes: Did he get referrals from all over the country?

Guerry: All over the world. Retinoblastoma was his big forte. Ira Jones and Bob Ellsworth took over retinoblastoma when Al stopped. But Al was the retinoblastoma man par excellence, and patients would be flown in from everywhere for him to take care of.

Mrs. Guerry: I think he was probably more supportive of the residents than anyone else on the staff.

Guerry: No question about it. When I first got to the institute, Al was not married. He was—

* Reese AB. *Tumors of the Eye*. New York: Paul Hoeber, Inc, 1951, 1963.

Mrs. Guerry: —an "old man" of fifty.

Guerry: [laughing] An old man of fifty, that's right. He had his own penthouse and he would have parties for the residents there. We'd go down there and we would have a ball. Al didn't get married until after I'd left the institute. He was a cousin of Joe Wadsworth.

Hughes: Did his marriage interfere with his ophthalmology?

Guerry: No. I remember one thing, he used to go to Squam Lake every summer, and about half the people of Richmond used to go to Squam Lake, so Al knew everybody in Richmond. When I decided to go to Richmond [to practice ophthalmology], he talked to all the people down there and also talked to Jack Burke in Washington, who was a dear friend of his and used to go up to Squam Lake. Reese told him I was a good guy and to see if he couldn't help me get started in Richmond.

When the great Burke laid on the hands, I was made down there in Richmond. I didn't have any problems because he'd tell everybody, "Don't come up to see me; you've got a guy down there named Guerry doing anything I can do, maybe better." So when that word got around, from day one, I never had any problems with practice. And that was purely and simply Al Reese telling Dr. Burke to look out for me because I was a good guy and a good ophthalmologist. Later on, Dr. Burke sponsored me for the American Ophthalmological Society.

Hughes: What was Dr. Reese doing to further the residents' education?

Guerry: He would spend endless hours with us in pathology. John McGavic from Philadelphia was real close to Al Reese, and the two of them gave us all our pathology. As a result, we had the best ophthalmic pathology anywhere.

Hughes: A younger person was Clem McCulloch, who was a resident when you were.

Guerry: Yes, he started out with me. Of the bunch of residents when I was there, five of us became department heads.

Hughes: Who were they?

Guerry: Clem McCulloch—

Hughes: Who went back to Toronto, right?

Guerry: That's right. By the way, he and his father first described choroideremia. They had a terrible hassle with Freddy Verhoeff about this, and they won, much to Freddy's chagrin. Others who became chairmen were Joe Wadsworth at Duke, Phinizy Calhoun at Emory, and Jim McGraw at Syracuse.

Mrs. Guerry: George Wise.

Guerry: Well, he wasn't head of a department. He was a big researcher at Bellevue, but we'll get into that later. And then I was head of a department. So there were five of us, which is pretty unusual.

Hughes: Could you sense at the time that these were exceptional people?

Guerry: Everybody on the resident staff was exceptional. Any of those boys we turned out could have been professors.

George Wise had an early demise from cardiovascular disease, which was very sad. He was recognized as one of the top researchers in ocular vascular problems, particularly retinopathies. He had a lot to do with discovering why you get neovascularization in the retina. As a matter of fact, I think he probably should be credited with having discovered it, although the fellow that is usually given credit for it was a fellow in Israel whose name I can't think of right now. But I think Wise probably antedated him in his work.

Hughes: I don't think you've talked about George Smelser.

Guerry: George Smelser was one of the kindest, gentlest, nicest fellows that ever lived, and the most self-effacing, and one of the best lab men you'll ever run into. He did a tremendous amount of basic research. He was generally recognized as a top-drawer man. He had a coronary infarction when I was senior resident, and he was out for about six months and then came back, and he had to take things easy for a while. He took over the research effort after Lutz von Sallmann went to Bethesda.

Hughes: Would he see patients as well?

Guerry: He would only see patients if they had something that we were interested in from an experimental standpoint.

Hughes: Was he an MD?

Guerry: He was a PhD.

Hughes: The only other name that I have on my list that we haven't mentioned is Gordon Bruce.

Guerry: Gordon was one of the great people of all time. He was Mr. Personality himself.

Mrs. Guerry: And still is.*

Guerry: And still is. [laughs] Just a great guy. I never saw Gordon when he wasn't in a good frame of mind. He was usually bubbling over and a jolly fellow. I never knew anybody that disliked Gordon. But he was an extraordinarily capable ophthalmologist. He was head of one of the clinics at Presbyterian and had an office in the institute, as did Castroviejo. He was a very good teacher. He used to scrub with me. He'd say, "Aw, come on, Guerry, you can do better than that. Come on, come on, now, give me the good stuff!" He was just a great fellow and would pat you on the back when you did well. "Ah, good, that's the way to go. Now you got it made." It was like going to a football game. [laughs] He was a Canadian by birth and president of the AOS. But he came down and stayed in the United States.

Mrs. Guerry: Charlie Perera.

Guerry: Charlie Perera took over [Charles H.] May's textbook, *Manual of Diseases of the Eye*, after May retired. I think when Perera took it over, it had gone through its sixteenth edition or something like that, some astronomical number. Charlie edited the book for several years. Charlie was real good with the residents and a real good teacher. He had a general practice downtown and was a good surgeon and also a very good pathologist. Incidentally, Dr. May was his uncle.

Hughes: How many of these people were full-time?

Guerry: Let's see, now. All those researchers were, except Troncoso. Cassy [Castroviejo] was full-time when he first came to the institute. I think he was doing mostly research, with a little private practice at first. Later, Cassy had an office and did full-time private practice.

Hughes: You said that the institute had money because of Wheeler's ability as a fundraiser and his popularity with his patients?

* Gordon Bruce has since died [1991].

Guerry: Yes. But as I've already mentioned, they also had some tremendous gifts from Harkness.

Hughes: Did that cause any problems with the department?

Guerry: You mean the eye institute?

Hughes: Are the department and the institute one and the same?

Guerry: Yes. You couldn't tell where one began and the other left off. They were intermeshed and in the same location.

Mrs. Guerry: It's a separate building in the medical complex.

Guerry: On the fifth floor of the eye institute, we had bacteriology. That's where Khorazo was with her bacteriology, along with histology and pathology. But the research effort was on the fifth floor over in the old Presbyterian building across the garden. That was Thygie's fortress, along with Smelser, Karl Meyer, and von Sallmann. Thygie ran that show. When he left, Jack Dunnington really took it over and ran the institute himself; von Sallmann was not an equal head at that time. He was head of research, but he had nothing to say about the running of the institute and the eye department. Jack Dunnington made all the decisions. Thygie had been an equal head.

Hughes: Did that lead to confrontations between the two?

Guerry: I'm sure they had some knockdowns and dragouts, but we were never privy to that. But I know that at times they had their problems. I think that had not the war come along and Thygie's leaving, there would have been a struggle for power. I think Dunnington would have won because he had more political clout.

Hughes: Why do you think that?

Guerry: I believe he had enough power in the community, being a clinician. It would have been a board decision, and I believe that there were probably more board members that would have decided that it should go to Dunnington. Thank God it never came to that. As a matter of fact, I really never saw much of that. They had a meeting of minds about most things. But they were two strong personalities, and each didn't hesitate to defend his own turf.

Hughes: Did the basic science course in ophthalmology continue after Dr. Thygeson left?

Guerry: Yes. Smelser and von Sallmann carried on with that.

I'll tell you who was an extraordinary fellow on our resident staff. It was a fellow named Frank Payne. He was not interested in surgery—he hated surgery—but he was a brilliant mathematician and a brilliant person as far as optics went. He wrote some extraordinary papers in optics having to do with the cross cylinder that I'm sure were published, but he never really got much credit for that.

Hugh McCowen was another one of the attendings who had his office in the institute. He was real kind to all the residents; he used to have them out to parties at his home. He was great at instructing and helping us out with our surgery. He died very young, just after I finished up there [1944].

And then there was Ray [Raynold N.] Berke. He had his office across the river in New Jersey. He did a tremendous amount of work on ptosis and was recognized as an authority on this subject. He was most helpful in teaching all of the residents. The orbit was his domain and he supervised our dissections.

Who were the other attendings?

Mrs. Guerry: [John P.] Macnie and Tom Johnson.

Guerry: John Wheeler recruited Macnie as a teacher. He was not a researcher. He hung around the institute about a year after I was there, and then he just suddenly departed for California and retired. He said he was tired of doing anything and wanted to rest and have fun. I never heard what happened to him. He was real good to me the short time that I was there with him, but I never knew him well.

Tom Johnson was known as the "Patriarch." When John Wheeler was mustered out of the army, he persuaded Tom Johnson to leave the army and come into practice with him. When John Wheeler moved up to the institute, Tom Johnson carried on in the old Wheeler office downtown. He was head of a clinic and a great role model for all the residents. Incidentally, in Maynard Wheeler's history of the institute, there is a chapter written by Tom describing his relationships with John Wheeler and with the institute.*

* Wheeler MC. *The Eye Institute in New York: An Intimate History*. New York: Cooper Square Publishers, Inc, 1969, pp. 14–29.

I haven't said anything about physiological optics, probably because I hated it. LeGrand Hardy taught it but for me it was the dullest discipline of all. Paul Boeder, who was with the American Optical Company at that time, was a visiting professor. He came down and spent three weeks with us, and I understood and almost enjoyed his lectures. He was a most impressive person with a lot of presence.*

Research Fellow, Snyder Ophthalmological Foundation, 1941–1942

Hughes: You were a Snyder Research Fellow for the first six months of your residency?

Guerry: That's right.

Hughes: How did that come about?

Guerry: I finished at Manhattan about the end of December [1941], and I went to the eye institute right after that. So I had six months to spend on a research problem or problems. This would pay me a small salary until I started my residency on July 1, and I worked on a lot of little things with Dr. Thygeson and Dr. Smelser.

I had an idea which in retrospect was really foolish. I was trying to do some glaucoma research, and I didn't know anything about glaucoma. I had to spend about half my time reading about what glaucoma was and about glaucoma research. I was interested in that subject because my father had glaucoma and I thought that we probably would have it in the family. So I had some ideas about how you might be able to work this problem out, but I won't go into the details because in retrospect it was really kind of foolish. I was working with rabbits.

Hughes: Are you referring to the diathermy?

Guerry: No. That was later on after I got into my residency. In this earlier research, I had the idea of putting pressure on one eyelid—sort of a massage-type thing—because it was known that pressure on the eye could lower the pressure temporarily. I figured that maybe you could open up these filtration channels by massaging them, by putting a cup over them, and then pulsing the cup. My research was on animals, and you could run the pressure down all right, practically make it flat, but it wouldn't

* For more on Dr. Paul Boeder, see *Paul Boeder, PhD: Teacher of Physiological Optics.* Ophthalmology Oral History Series, A Link With Our Past. Interviews conducted by Sally Smith Hughes, PhD, The Foundation of the American Academy of Ophthalmology, San Francisco, and The Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1992.

last. If these channels were stopped up, which was supposed to be the cause of glaucoma at that time, then we thought maybe you'd blow those channels open with this massage. But it didn't work. I think Mr. Snyder would have been very much disappointed at what his funds went into. [laughter] I worked hard at it, though.

Doctorate of Medical Science, 1944

Hughes: Well, you went on to get a doctorate of medical science. That was an unusual thing to do, wasn't it?

Guerry: All the residents were encouraged to do it. But not everyone did. You had to do some research and write a paper. A few of the papers merited publication.

Hughes: What did you work on?

Guerry: I worked here again on glaucoma. This research had to do with coagulation of the long posterior ciliary arteries and its affect on intraocular pressure. That really turned out to have some clinical applications. In later years, a lot of people doing retinal detachment surgery came to find out that what we said was true, that if you coagulated both the long posterior ciliary arteries, you were very apt to get into trouble in the anterior segment. You could coagulate one of them and you'd be all right. But if you coagulated both of them, the anterior segment would become atrophic and you'd have atrophy of the ciliary body with chronic uveitis, followed by pthysis. The fact that you had to avoid those arteries was written up by the detachment people in later years.

I remember [Charles L.] Schepens had written an article about avoiding these arteries, and he hadn't mentioned anything about my work. I wrote him a letter and sent him a copy of my reprint, and I got a nice letter back from him saying he just flat out neglected researching the literature and had neglected that paper but that what I said was absolutely true. He also apologized for his dereliction.

Hughes: Were you doing this research on your own?

Guerry: Yes. I had the time to do it while I was a resident, and Dr. von Sallmann gave me lots of advice.

Surgical Training

Hughes: How much surgery were you doing as a resident?

Guerry: In those days, we got about 125 to 150 cataracts, and I imagine 125 squints. We did about 30 or 40 glaucoma operations and a fair amount of oculoplastics and 25 to 30 retinal detachments.

Hughes: The latter using diathermy?

Guerry: Yes, that's right.

Hughes: At what stage was it decided that you were ready for surgery?

Guerry: It was time-related, but also had to do with metamorphosis of surgical skills. Six months into your residency, you would be allowed to do simple procedures. But, by and large, when you got to a certain point in time, usually after a year, if you were dexterous enough and under strict supervision, you began to operate the more difficult cases. Some of the surgeons were probably a little slower than others in turning the residents loose and letting them do more. Occasionally, residents, not just in our institution but also in others, decided that surgery was not for them, and they would give their surgical cases over to other residents. This was unusual but did happen. By the time you became senior resident, you could hold your own with most of the attendings.

Hughes: Did you like surgery?

Guerry: I loved surgery. I was a good surgeon. I wasn't the world's best; I wasn't another Castroviejo or anything like that, although I might have been if I had done as much surgery as he did. [laughs]

Hughes: Did you enjoy the medical aspects of ophthalmology?

Guerry: Yes, I liked medical ophthalmology. I liked surgery and I liked medical ophthalmology, and I could have been happy with either or both, but I would never have been completely happy or satisfied without some research, both basic and clinical.

Hughes: What you describe seems to have been an extraordinarily rich and varied exposure to ophthalmology.

Mrs.
Guerry: You see how close the staff was to the residents. The two of us still know these people. It was a pretty remarkable feeling of

camaraderie, and I think Jack Dunnington was the person responsible for that. It was a real family feeling.

Guerry: We left New York with mixed emotions. Both Al Reese and Jack Dunnington had asked me to come with them, but we wanted to come back South. And we've never regretted our decision.

American Board of Ophthalmology Examination, 1944

[Interview 3: December 1, 1989, Sausalito, California]

Hughes: The next step is the American Board of Ophthalmology, which you took and passed in 1944. Had that always been something that you were going to do?

Guerry: If you're going to be an ophthalmologist, you've got to take the boards. It is very difficult to practice ophthalmology without being certified by the board. I think everybody felt that that was a must, and I certainly was no different from the rest of the herd in that respect. I had a lot of respect for the board because the board membership was composed of very erudite, educated, dedicated ophthalmologists. I think they really made our specialty. And we were the first ones to have a board, and we led the way for other medical specialties.

Hughes: Did you study hard?

Guerry: You didn't have to study hard when you had gone through a good program. With our basic program, we were so far ahead of most candidates that we really didn't have to study.

Hughes: So you just took it.

Guerry: I just took it, and not with great trepidation. When I took my boards in nose and throat—which I did because I didn't know whether the army was going to take me; I hoped they would—I wanted to have those boards. Then when the armed forces turned me down, I felt the same way about the boards in ophthalmology. So I had my boards in both. [laughs]

Hughes: And you sailed through the boards in nose and throat as well?

Guerry: Yes. But I was a lot more worried because I didn't know much basic material. We hadn't been taught the basic stuff and didn't have the kind of courses which we had at Presbyterian.

Hughes: Do the board exams tend to concentrate on the more basic science aspects?

Guerry: Well, you've got to have both. Of course, the clinical is very, very important because most candidates are going to be doing clinical ophthalmology. But I would say that the emphasis is on both. I don't think it's weighted in any one direction, but you do need a good basic background. The exam was more clinically oriented in the old days when I took mine, because if it hadn't been, practically nobody would have gotten through. The written, which must be passed satisfactorily before you are eligible for the oral, is more basic and the oral is more pragmatic.

Hughes: Is it left very much up to the individual examiner what he asks?

Guerry: The first thing a candidate must do is take the written exam. When you pass your written boards, then you go for the orals. And in the orals, you have props so that all the candidates get pretty much the same questions. In other words, you can go to a different examiner, and the same type of question is asked. It may not be posed exactly the same way, but it's really the same question.

Hughes: And that was true even when you were taking it?

Guerry: Not in those days. When I took the exam in New York at the institute where the exams were being held, the examiner just came right in and we chatted about various basic and clinical ophthalmologic problems and wound up by doing an extracapsular cataract extraction on a pig's eye. There was no written [component] in those days. But then they decided this wasn't quite cricket because one examiner might be very hard in asking questions and the others might not. You might hit the hard one, and if you did, you'd be in the soup.

Hughes: Are there any stories to be told about your taking the board exam?

Guerry: I remember in those days you had to actually do surgery on a pig's eye. Since I was already at Presbyterian where the oral exams were to be held, I had to go to the abattoir to get the pig eyes for the candidates to operate on, and each candidate had to bring his own instruments. The most exciting part was finding that many pig eyes. [laughs]

Hughes: The examiners were right there watching you?

Guerry: Yes, they were watching you. And then they had little manikin faces with a socket for the pig's eyeball. You'd put the eyeball in and sit there and do your cataract extraction—extracap, of course. Of course, everybody did it with fear and trepidation. [laughs] The examiners just wanted to see how you responded to this sort of situation. This hasn't been done for many years.

Hughes: It used to be that you got the results very quickly. Within a couple of days, you knew whether you'd passed or not.

Guerry: That's right.

Assessing His Education in Ophthalmology

Hughes: Please say something about how well you think your education and training prepared you for the career that lay ahead of you.

Guerry: I felt that the education that I had was about as good as anybody could have had then. If I had to do it over, at that time and under those circumstances, I don't think I would change any of it. My training was the best.

Hughes: You're thinking of all aspects?

Guerry: I'm thinking about the basic aspects and the clinical aspects and the contacts I made. You may be the most brilliant man in the world, but if you hide your light under a bushel, you'll never be recognized and you'll never get to do the things that you're capable of doing.

Now, I wouldn't say that's true today, I mean, about where I would go for an education in ophthalmology. Sally and I were just talking this morning about what the pillars of wisdom are in ophthalmology today, and I would not put Presbyterian amongst the top few. It's a good institution and you can get a good residency there, but it's not number one. I would say there are several institutions at the present time that have better residency programs.

Hughes: It seems to be the case that departments and institutions come and go.

Guerry: That's right.

Hughes: I guess their reputation is dependent on the constellation of personages there at any one given time.

Guerry: Exactly.

Hughes: You were at Columbia at an exceptional period.

Guerry: Yes, no question about it.

Hughes: Did you have any regrets about leaving New York?

Guerry: None at all. I was glad to get out of the city. We really enjoyed it, but we were not big-town folks. I could have stayed; I had some real nice offers from both Dunnington and Reese. After we chatted about it, they said, "I think you're smart. You ought to get back South where you belong." [laughter]

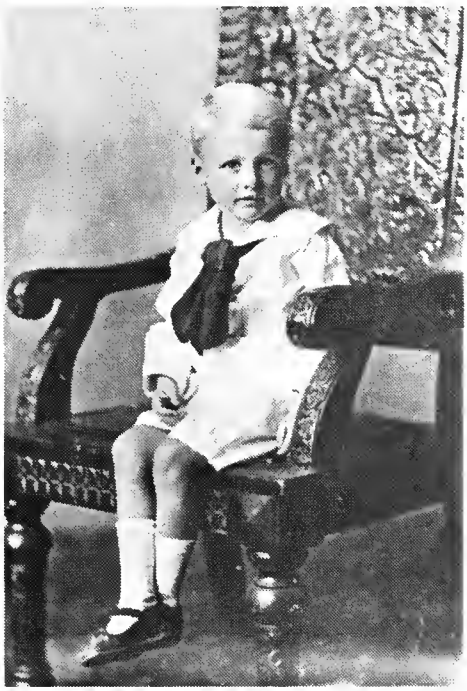
PHOTOGRAPHS

Grandfather
DuPont Guerry

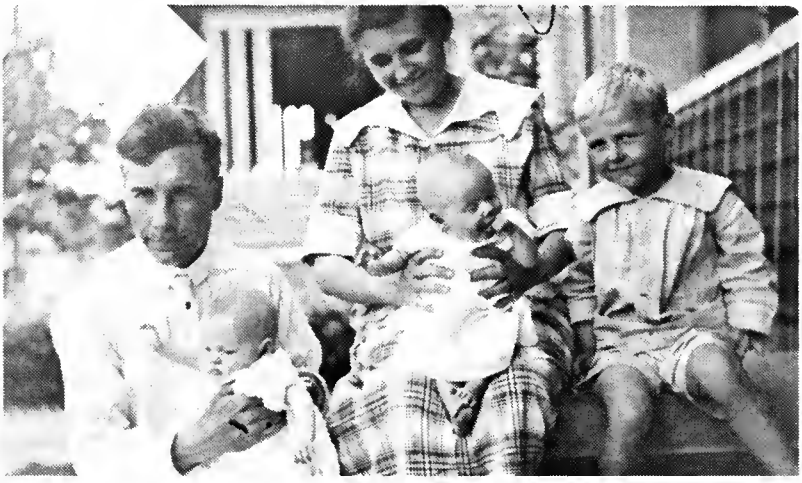
Grandmother
Mary Frances Davenport Guerry

The Guerry family home
Greenville, South Carolina

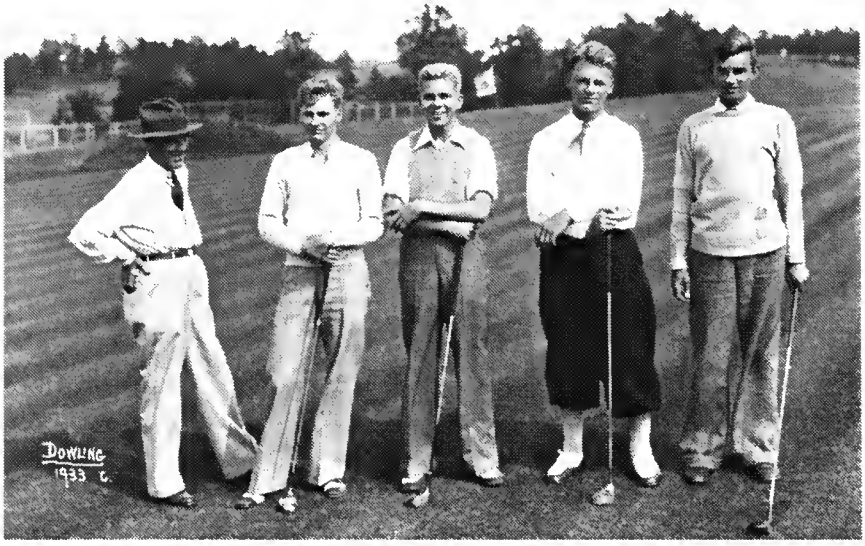
Young DuPont Guerry III



DuPont III at age 5



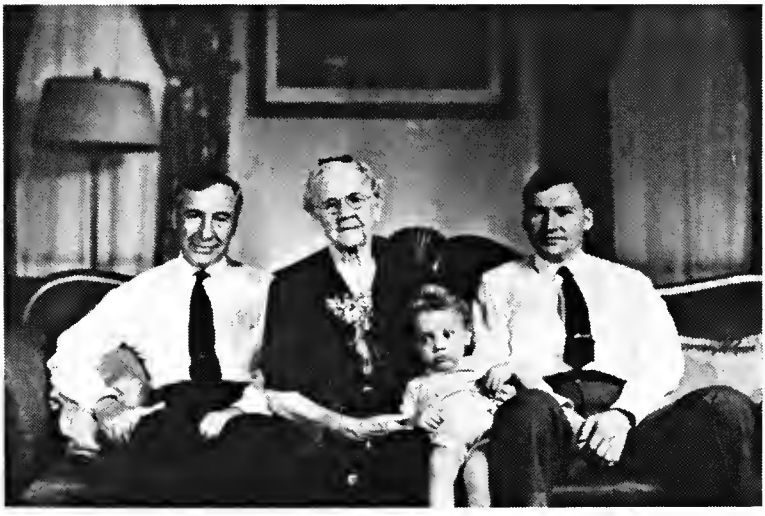
Father, DuPont Guerry, Jr., and mother, Mary Ola Gregory Guerry, with twin sisters, Mary and Harriet, and DuPont III



Furman Golf Team, 1933
Dave Ferguson (coach), DuPont Guerry III, Walton Smith, Ben Ashcraft, Charlie McGee

DuPont Guerry III and Sally Kennon Williams Guerry, Charlottesville, Virginia, 1938

Resident Staff, Institute of Ophthalmology, Presbyterian Hospital, Columbia University, New York, 1942
Front: Gerald Schwarz, Phinizy Calhoun, Robert Chase, George Wise
Back: Joseph Wadsworth, Clement McCulloch, Frank Payne, DuPont Guerry III



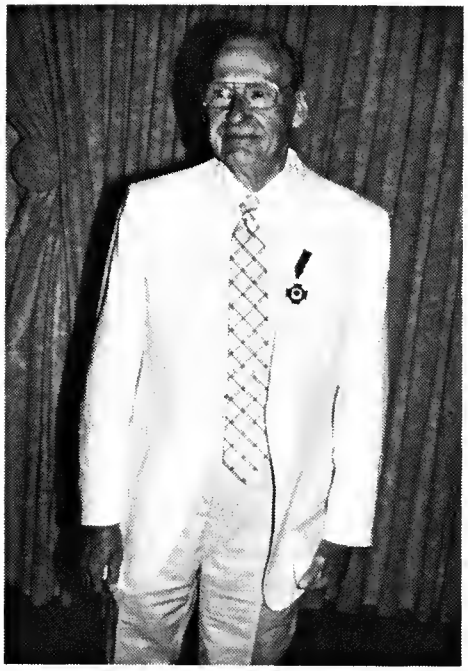
Four generations
DuPont Guerry, Jr., Mary Frances Davenport Guerry, DuPont Guerry IV, and DuPont Guerry III

The Guerrys, 1955
Front: Mary Davenport and Thomas LeGrand
Back: Richard Kennon, mother Sally, father DuPont III, and DuPont IV

Herb Wiesinger, DuPont Guerry III, and Zeiss technician (unidentified) with the xenon arc photocoagulator, 1958

The chairman and Mrs. Guerry at the American Ophthalmological Society, 1979

The Supportive Family
The American Ophthalmological Society, 1985
Front: Robin Sands Guerry, Mary Guerry Tucker, Sarah Thomas Guerry, Cynthia Herron Guerry
Back: Richard Kennon Guerry, Henry St. George Tucker III, DuPont Guerry IV, Thomas LeGrand Guerry



Howe Medalist, 1987

DuPont III hard at play

II. OPHTHALMOLOGIST IN RICHMOND, VIRGINIA, 1944–1988

Decision To Settle in Richmond

Hughes: *Why did you choose Richmond?*

Guerry: Well, I had an offer in Atlanta, and I had an offer in New Orleans. Grady Clay offered me a place in Atlanta, and Grady Clay and Phinizy Calhoun's father [Ferdinand Phinizy Calhoun, Sr.] controlled ophthalmology in Atlanta. Then there was a chap in New Orleans. What was the old boy's name?

Mrs. Guerry: Wiley Buffington.

Guerry: Wiley Buffington, whose office was in the Hibernia Bank Building—I'll never forget that. I spent three or four days down there with him. We had some kinfolks in New Orleans that we spent some time with, and they were anxious for us to settle there. Wiley showed me his office. But the most interesting thing was that when lunchtime rolled around, we went down and had lunch at his club, the Pickwick Club, located in the same building. After a very good New Orleans lunch, we repaired to a siesta room where there were cubicles with a bunk on either side. We each lay down on our respective bunks and after a short siesta we discussed his practice as well as other general and ophthalmological topics. We went back to work at four and worked until about nine-thirty, pretty much as they do in Spain.

Hughes: Why did you decide against setting up practice in New Orleans or Atlanta?

Guerry: I really wanted to run my own show. I figured that if I went in with somebody, they'd have me set in their ways, and I'd rather be set in my own. [laughs] I had Virginia connections because Sally was a Virginian, had been reared there, and she had a lot of kinfolks there. Then we had a lot of connections with "The University" in Charlottesville. And many of my classmates from medical school had settled in Virginia. So we had a lot of reasons.

Hughes: Were you assuming that you would have a university appointment as well as the private practice?

Guerry: I wouldn't have gone to a place where I didn't have university affiliations.

Mrs. Guerry: The chairman of the Department of Ophthalmology at the Medical College of Virginia, Robert H. Courtney, was very anxious to have DuPont come there. Courtney was having health problems. So at first DuPont had no connection with Richmond, but then suddenly he had a place at the Medical College.

Hughes: You wanted to be in Richmond for nonophthalmological reasons, but then everything in ophthalmology worked as well. Is that right?

Mrs. Guerry: Richmond had every possibility of being a great ophthalmological center.

Guerry: But I had to start from scratch.

Mrs. Guerry: The chairman of the Department of Surgery—ophthalmology was a section then—was Ike [Isaac Alexander] Bigger. He was an old friend of DuPont's family doctor, John Fewwell, who was from Rock Hill, South Carolina, Ike's hometown.

Hughes: You saw it was something that could be developed.

Guerry: Exactly. We always said about Richmond, it's the world's largest small town. [laughter]

Hughes: What is the history of the Medical College of Virginia [MCV]?

Guerry: The Medical College of Virginia is an old institution and its long and interesting history has been beautifully chronicled by my friend and two-time Pulitzer Prize winner and retired editor of the *Richmond Times-Dispatch*, Virginius Dabney, in his history of Virginia Commonwealth University. I refer you to Vi's book.*

Hughes: Was it mainly a southern student body when you arrived in 1944?

Guerry: Yes. We had a few "outsiders," but, by and large, it was.

Another thing peculiar to the city of Richmond was the large number of proprietary hospitals. There was Johnston-Willis Hospital, Stuart Circle Hospital and Retreat for the Sick, St. Elizabeth's, the old McGuire Hospital, and St. Luke's Hospital. Two or three months after my arrival in Richmond when I started doing surgery, I would have a case maybe in each hospital, and it would take me practically a whole day to make rounds.

Establishing a Practice

Guerry: Dunnington said, when I told him I had decided on Richmond, "DuPont, you've made up your mind you want to go to Richmond. Don't tie up with any one group. If you do, you'll be a pariah as far as everybody else is concerned and you won't get any patients from anybody except your own group. You're too well trained not to be number one. So, my advice is don't tie yourself down." I didn't, and I never regretted it.

Hughes: You didn't have trouble getting referrals?

Guerry: Oh, I had a whole lot more than I would have had if I joined only one group. Another factor of even greater importance, as I mentioned before, was that Jack Burke in Washington, DC was responsible for my getting a real head start.

Hughes: Please comment on the training that the ophthalmologists in Richmond had.

Guerry: There were still two or three people doing EENT at that time. We had Robert Courtney, who was still the professor at MCV; he had trained at the Medical College. Then there was Rudolph Thomason, who also trained there, as did his associate Edgar Childrey.

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* Dabney V. *Virginia Commonwealth University: A Sesquicentennial History*. Charlottesville: University Press of Virginia, 1987. The Medical College of Virginia and the Richmond Professional Institute united in 1968 to form Virginia Commonwealth University.

Mrs. Guerry: What about Bill [Edwin Williamson] Perkins?

Guerry: You are right. Bill Perkins, who trained at New York Eye and Ear, was overseas with the MCV military unit as was Ben [Benjamin] Shepherd. Both came back after the war. Emory Hill, who preceded Courtney as professor at MCV, had died some years before I got here.

Mrs. Guerry: Well, he was a man who had a national reputation.

Guerry: Yes. He was secretary of the AOS for several years.

Hughes: Did you ever sense any feeling of resentment from the established ophthalmologists when you, a young whippersnapper with very good training, came in from New York and tried to establish a practice?

Guerry: Yes, there was no question about it that this was a very real threat when I went down there and talked to them. They said, "Well, if you want to come to Richmond, it's all right, but it'll take you at least two years to make expenses." It sounded pretty gloomy, but I made expenses the first two weeks. [laughter]

Hughes: Was that largely because of Jack Burke's referrals?

Guerry: Yes, plus the fact that Dr. Beverley Randolph Wellford, "Monk" to his friends, was an old buddy of Jack Dunnington. He had trained at the New York Eye and Ear and had built up an enviable ENT practice in Richmond. His influence was exceedingly helpful.

Mrs. Guerry: And also the fact that the ophthalmologists with the broadest training were off to the wars.

Guerry: Several general practitioners that were well thought of had heard about me from Jack Burke and they started referring patients. As soon as that happened, then the word really got around.

Hughes: Where was your office?

Guerry: I rented an office in the professional building right across from the John Marshall Hotel, on the fifth floor.

Mrs. Guerry: That's downtown Richmond, just blocks from the Medical College.

Hughes: That was deliberate, the proximity to the Medical College?

Guerry: Right. It had been Dr. Charles Caravati's office. He was an internist who specialized in GI [gastrointestinal] diseases. I took over his office because he was with the group from the Medical College which was in Europe during World War II. I kept his office until he came back from the wars, and then I bought a place on Monument Avenue and moved up there.

Hughes: Where you were from then on?

Guerry: I stayed there until I retired in 1987—2015 Monument Avenue.

Hughes: Did you have a partner?

Guerry: I had one after about six months, a classmate of mine named Charles N. Romaine IV. But, after about a year and a half, we called it quits. Friendly, no harm at all, and we've remained friends. He was a good ophthalmologist and had had real good training, especially in motility with old Dr. White at Post Graduate [Medical School and Hospital] in New York, the great muscle man of that era. Charlie went out on his own and did very well.

Hughes: Did you take on somebody else?

Guerry: Just about the time he left, Sally's cousin Richard Kennon Williams came back from the wars. He'd been doing ophthalmology in the navy in American Samoa, and he came with me as a fellow and stayed on as a partner. We had a great relationship for about thirty years.

Hughes: Did he have a good experience in the service?

Guerry: He'd had a good war experience.

Hughes: That seems to be a common story. People went out of a sense of duty, which is admirable, but not expecting to have such wonderful medical experiences, wonderful in the sense of advancing their own medical knowledge.

Guerry: Phil Thygeson had a magnificent war experience.

Hughes: He was primarily the one I was thinking of when I said that.

Guerry: Phinizy Calhoun had a terrific experience. He was in England, and he spent a lot of time at Moorfields and the other eye hospitals over there. He was close to Sir Stewart Duke-Elder. Sir Stewart looked out for him because he'd known of Phinizy's friends over here, Dunnington and Reese.

Department of Ophthalmology, Medical College of Virginia, in 1944

Hughes: Let's talk a little about the Department of Ophthalmology itself.

Guerry: Well, when I got there, Courtney was having his health problems. The department was being run by Rudolph Thomason and his associate Edgar Childrey, both of whom had trained at the Medical College. They did a good job of holding the department together as a functioning entity for clinical care, nothing more.

Hughes: These were part-time people?

Guerry: All part-time. The Department of Ophthalmology did not have a full-time man in the department. Courtney had not been full-time, and Emory Hill before him had not been, and old Dr. Robert White prior to that had not been. (This was another White, not the White in New York.) So the department was getting along in doing what the department had always done, which was not much of anything except to treat patients—diagnose and treat.

Hughes: No research?

Guerry: No research, not even any clinical research.

Hughes: Was there a training program?

Guerry: Yes, we had a training program of sorts. But it was not too good. We didn't have much to offer. If the residents wanted any basic sciences, they had to take a correspondence course or go away and take one.

Mrs. Guerry: That was the time that John Truslow came as dean from Columbia. He had been associate dean under [Willard C.] Rappeleye at Columbia.

Guerry: You remember Rappeleye. He and Thygie got along like cats and dogs.*

Mrs. Guerry: John Truslow was Yale College and Harvard Medical School, and associate dean at Columbia. He came to the Medical College of Virginia and shook it up a bit.

Guerry: As a matter of fact, the Medical College of Virginia in those days was still on probation. Probation meant that you could operate, but that if you didn't perk up they would take away your accreditation.

Hughes: What were they thinking of particularly?

Guerry: The training program and the fact that they'd had so few full-time faculty.

Hughes: Now, who was saying this?

Guerry: The accreditation board of the American Medical Association.

Hughes: When did this occur?

Guerry: Just after the war, when Truslow got there. Some of the people were making strides in the right direction, but when Truslow got there, he said, "This is insufferable and we've got to do something about it." So he set right in and did a lot of shaking and moving. There were a lot of unhappy people, too, because so many of them were perfectly happy the way things were; they could have a medical practice and do little else. I think they only had about five full-time men there.

Hughes: What changes did Truslow introduce?

Guerry: Well, first he started hiring good men for the faculty, ones who were geographically located full-time. He did that in practically all the departments. He got Dr. Peter Pastore, who came in as a full-time ear, nose, and throat man. He continued to recruit and things perked up tremendously.

* See Dr. Thygeson's oral history, p. 101.

Chairman, Department of Ophthalmology, Medical College of Virginia, 1953–1973

Initial Dissension

Hughes: *You became chairman in 1953, and according to several sources, it was an appointment that was not without some dissension. In fact, in Virginius Dabney's book on Virginia Commonwealth University, he said, "Dissension reared its head in the Department of Ophthalmology in 1953 when Dr. DuPont Guerry III was appointed acting chairman of the department, pending the selection of a full-time chairman."* Do you want to comment?*

Guerry: Yes, I'll give you a little background. That is the truth, but what had happened was this: Dr. Robert Courtney, who had been a professor for years and years, was ill, and he finally gave up the chairmanship and shortly thereafter died. In the interim, the department was run by an associate attending professor. For a while, it was Dr. Rudolph Thomason, and then after that, Dr. Edgar Childrey. Both of them were real good clinicians and good ophthalmologists, and for the kind of department that they had down at the Medical College in those days, they did quite well and served as adequate heads. But the department didn't do anything except see and treat patients. It didn't do any research, and it really didn't do much of anything. We shared the facilities with the ear, nose, and throat people. It wasn't much of a department.

When Courtney finally had to quit, the powers that be decided that they would recruit somebody on a full-time basis. They actually talked to Al Reese about heading up the department. Al said he didn't want to leave New York, and maybe Joe Wadsworth would be interested. They talked to Joe about it, and Joe said he didn't want to leave New York either and that if he ever did leave New York, it wouldn't be to go anywhere else but Duke, his old alma mater.

John Truslow, the new dean at the Medical College, who was really a mover and a shaker and appreciated good, viable departments, was anxious to do something, so he called me in one day and said, "We've got to do something about the department. Courtney's quit, and we've offered the chairmanship to these people and they don't want it. Both of them suggested that since you were down here, you'd had as good training as any of them, and that you would make a superb professor. How do you feel

* Dabney V. *Virginia Commonwealth University: A Sesquicentennial History*. Charlottesville: University Press of Virginia, 1987, p. 128.

about it?" I said, "Sure, I'll take a crack at it." He said, "We'll appoint you acting head for a little while, and if everything works out and if you feel right about it and we feel right about it, then maybe something will come of it on a permanent basis." I said, "Sure, I don't mind. But before I take it, let me just check with my confreres and see how they feel about it." I went around and talked to all the members of the department. All of them said, "Oh, that's a good idea. We're tickled you want the job, and I think that'll be fine. It won't bother us."

So Truslow went ahead and appointed me as acting head of the department. That's when the stuff hit the fan. My colleagues weren't particularly anxious for me to have the chair, but the main thing was, they didn't like Truslow. He had come in there as dean and realized what a precarious situation he had at the Medical College—that it was on probation—and that if something wasn't done about raising the caliber of the faculty and making first-rate departments, the Medical College was never going to get off probation and it might get into severe difficulties. So he began upgrading things, and this just went against the grain. It wasn't just the Department of Ophthalmology that was fussing about this; it was practically all the departments. Many people were happy with the status quo because they didn't have to work; they didn't have to do anything. There was very little teaching and no research going on, except an occasional department doing some. The Medical College had hit an all-time low.

When Truslow came in, he said, "We're not going to have any more of this." He began to upgrade departments. Ophthalmology was one of the first ones he started with. The ophthalmologists got together and wrote a real ugly letter accusing him of trampling on everybody's constitutional rights. You wouldn't believe the tenor of this letter.

They insisted that the board of visitors be consulted about my appointment; so Truslow called the board of visitors together and he told them that he had had a search committee chaired by Dr. Isaac Bigger, professor of surgery, who was one of the few internationally known people we had down here. The Department of Surgery had chaired the committee and had come up with my name and decided that I was best qualified to be an acting professor, with the idea that I might work into a full-time professor later on if I turned out to be satisfactory. Furthermore, I had chatted with everybody, and everybody was of a mind to acquiesce and to cooperate with me. So we thought that would quiet things down, but it didn't. They raised Cain. The board met again, and they went through rehashes again, and the board voted unanimously for me to stay as acting professor.

With that happy beginning, I started trying to build up the department. Strangely enough, everybody came around shortly, and we didn't have any more friction. Virginius Dabney said he had questioned some of the members of the ophthalmic community in 1985 about that incident. No one even remembered that it ever happened. [laughter]

That's the way I started out. It wasn't very auspicious at the time, but we didn't have any real problems after that. But I must give John Truslow credit for it. He recruited David Hume to head up the Department of Surgery after Dr. Bigger retired. Dave was another mover and shaker, and he shook up the Department of Surgery. Not only that, he shook up the whole medical school. Dave Hume and John Truslow had everybody really going gung-ho for a good institution. The Medical College got off probation, and we've had no problems since in that regard.

There's no question about it that Truslow was really responsible for taking a mediocre institution with nothing but a local reputation, and not of high regard, and making it into a first-class, nationally recognized institution. He almost did it singlehandedly. Of course, he wore out his welcome, and before he had accomplished all the things he wanted to, he moved down to Galveston.

Part-Time Chairman

Hughes: Were you the last part-time chairman?

Guerry: I was the last part-time chairman in the Medical College. The reason they put up with me as long as they did was twofold. One, they had not been able to recruit a full-time person. They had actually made the effort when they offered the job to Al Reese and then to Joe Wadsworth, and they realized that they probably were not going to be able to get someone first-rate to head up the department on a full-time basis. So they said they'd put me as acting head. Second, I did what they thought was a creditable job, and they seemed to be pleased with what I was doing in the department. I was doing all the good things that a full-time geographically located chair would do, and for peanuts, my salary being a token, so there was no real reason for them to change horses.

Finally, after I'd been professor for about twenty years and had built up the department into a decent show, they decided that since I was the only part-time chairman left, that I probably should be full-time and make it unanimous. The next to last one was Dr. Hudnallware, professor of ob/gyn. He died, and I was the

only one left. They made me an offer, and I told them I had really enjoyed being chairman for twenty years and I would continue to work with them and I would be perfectly happy, but that I didn't have any idea of being a full-time geographically located department head.

I resigned as chairman of the department [January 1, 1973], but I kept the title of professor. [Walter] Geeraets, whom I had brought in to do the research work and who had been helping tremendously with the administration even prior to my resignation, ran the department until they were able to recruit somebody. That took about three years. They then recruited Dr. Roderick MacDonald, who had been in the eye department at Louisville.

Rod, from the minute he got there, bless his soul, was a good administrator and a good ophthalmologist, but he wanted very much to be a dean somewhere, and they were getting ready to elect a new dean at the Medical College. He felt he was in the running and put his name in the hopper, and when he didn't get it, he was still interested in being a dean. Since he was from South Carolina and people knew he had had a lot of experience, they recruited him for that job. He went down there and did a beautiful job in getting the school off the ground. Then, as happens to all deans, he and the president got to the point where they were just barely on speaking terms and it seemed the better part of valor to get the heck out before the roof fell in. So he left and was in private practice with me for about two years. Then when I retired, he went out and practiced on his own and is still practicing. He was succeeded by Dr. Andrew Ferry, who is still chairman of the department.

Hughes: Was there ever any problem associated with the fact that you were the last part-time chairman?

Guerry: Yes. The administration wanted me to become full-time since the trend was to have only full-time professors. They made me an offer with a fair salary. But I was at the point where after twenty years, I really had done about all the things that I wanted to do. I was at the point where if that reason for quitting hadn't come about, I would probably have given up the chairmanship within the next year or so anyhow, because I had a tremendous uptown practice and I had all I could do there. I was interested in my practice, and I had good relationships with my patients. So there was every reason to give up the chairmanship and not any compelling reason to stay. In retrospect, it was a wise decision and one I have never regretted.

Hughes: Why did the administration want full-time chairmen?

Guerry: At that time, that was the general trend. The attendings were thought to be second-rate purveyors of medical knowledge, and you had to be a geographically located full-timer. Strangely enough, now that medical education and faculty salaries have gotten so expensive, the swing has been back to recruiting town people instead of gown people to take up the slack in the teaching. I think this is good for all concerned. This is not just a local phenomenon but is pretty much all pervasive.

I have always felt that a lot of medicine is learned by people who are out in the hustings doing it. If you have gotten your medical education only from pure academicians, you wake up the worse for it for the simple reason that the practice of medicine is an art. You don't learn that as a rule from the academicians; you get it from the people who've been in the hustings doing medicine.

Hughes: What would you say was the department's emphasis in turning out residents?

Guerry: The great majority of the residents before I took over the department were trained to take care of local needs in the state of Virginia and nothing more. Most of the residents came from Virginia. The department didn't recruit nationally. Almost all of them practiced close to Richmond or its environs or in the state of Virginia. A few, though, did go out of state.

When I took over, we began recruiting a lot of residents from out of state. We made an attempt to get a general mix from various and sundry places and with various and sundry ideas and attitudes, but always with the idea that these were bright people. It's said that if you do a residency somewhere, you are very apt to stay in that vicinity. As a consequence, a lot of the people that we recruited stayed here and have done quite well practicing in Richmond. Many have gone elsewhere and a surprisingly large number have ended up in academia as professors and researchers.

The Patient Pool

*Hughes: Dr. Ferguson commented that there was a lot of pathological material in the clinic.**

Guerry: Tremendous.

Hughes: How did that come to be?

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* Telephone interview with Dr. James G. Ferguson, April 4, 1990.

Guerry: It's unbelievable the number of patients that go through our outpatient clinics, not just in ophthalmology but in everything. As a consequence, there's a plethora of pathology to be seen. Every conceivable kind of case would come through. As a matter of fact, I think the amount of pathology we saw there was probably four or five times as great as it was when I was at Presbyterian.

Most of the people that we saw in the clinic were poor people from the farms but more particularly from the slums—people who had been neglected and were in bad shape physically, mentally, and emotionally. We saw all kinds, and scads of them. In addition, there was always a tremendous number of traumatic cases.

Hughes: Dr. Ferry is interested in pathology, but did you always have good pathologists associated with the department?

Guerry: We had a fellow, who recently died, named Gordon Madge. He was a general pathologist but branched out into ophthalmic pathology. He turned out to be a very good, solid ophthalmic pathologist and will be missed. Dr. Ferry, being a recognized ophthalmic pathologist, took over the pathology teaching. But Gordon Madge continued to do most of ophthalmic pathology from the standpoint of surgical pathology. But research pathology and teaching pathology, Dr. Ferry continues to do.

University Affiliation

Hughes: Did the Medical College's lack of university affiliation until Virginia Commonwealth University came along affect the Department of Ophthalmology?

Guerry: I am sure that it did. When John Truslow and Dave Hume came to MCV, they began to make noises concerning a university affiliation because they felt that this was essential. It was almost impossible to get federal funds if you weren't affiliated with a university.

Hughes: Was that in the fifties?

Guerry: Yes, that's when it was. At that time, the Medical College of Virginia and Jefferson Medical College in Philadelphia were the only two unaffiliated medical schools in the country. Jefferson

finally did something about it,* and we did something about it by joining up with the Richmond Professional Institute, which was a very interesting institution that got started along about the First World War, in 1917. It was an out-of-town arm of William and Mary into the 1940s or '50s, and then they wanted to become an independent institution. Finally, William and Mary was tired of fooling with the institute, so they turned it loose and let it go on its own. It became an uptown college, and it needed MCV to make it a university.

A large segment of their faculty was not the least bit interested in changing, and that was also true of our faculty at the Medical College. So it finally got to the point where they had to use a little duress, and that's where Dave Hume came in. He started preaching the gospel and working with Truslow, and then we became a part of the Virginia Commonwealth University. Some of the old guards from MCV did not take kindly to this at first, but they gradually came around. But they insist on alluding to the Medical College by its old name. So the happy solution there was what we now call the Medical College of Virginia, Virginia Commonwealth University. The Medical College was the senior organization because it was founded as an arm of the Hampden-Sydney College.

Hughes: Was there ever any talk of affiliating with the University of Virginia?

Guerry: Yes, there was a lot of talk. I don't think it would have ever worked out, since there was just too much antipathy one for the other. The University of Virginia always looked askance at the Medical College of Virginia. They were sort of snooty and rightly so for a long, long time because the Medical College of Virginia with its many problems just wasn't running a particularly good show. When MCV finally got its act together, I think it was important that they remained separate institutions. Now we've got a third medical school in Virginia, which we need like a hole in the head, called the Medical College of Eastern Virginia, in Norfolk.

Hughes: What was the rationale?

Guerry: There was no real rationale; it was irrational. There was no need for it, but the people in Norfolk felt that they weren't properly

* For an account of Jefferson's affiliation with Wills Eye Hospital, see *Thomas David Duane, MD: Wills Eye Hospital and Thomas Jefferson Medical College*. Ophthalmology Oral History Series, A Link With Our Past. Interviews conducted by Sally Smith Hughes, PhD, The Foundation of the American Academy of Ophthalmology, San Francisco, and The Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1989.

represented with schools in Richmond and Charlottesville, and that the state needed three schools to turn out the number of doctors that we needed to take care of the state's sick. They were able to sell this to the legislators. It is state supported, but they don't get nearly as much state support as do the Medical College of Virginia and the university.

Hughes: Have the Medical College of Virginia and the University of Virginia always been in competition for state funding?

Guerry: Very much. The people at the university were always a little bit suspicious of the Medical College because it was so close to the state capitol. When Dr. [William T.] Sanger was president, it was said that he had a tunnel that went straight over to the state house, and if he needed something, he'd just go through the tunnel to put in a plea to the legislators. [laughter]

Of course, that was absurd, but a lot of the legislators patronized the doctors at MCV, it being a state school and so readily accessible. Also, they were appropriating funds for it, so they kept it well funded. But a lot of the legislators were also graduates of the University of Virginia, so they had a very kindly feeling toward it also. Both institutions got their proper share; I don't think there was any real evidence that one was neglected for the other. The legislators never adequately funded the Medical College of Eastern Virginia. They have given it short shrift.

Hughes: Was there ever a problem of the two older institutions raiding each other's faculties?

Guerry: To my knowledge, I don't think that has ever happened. It was so ingrained that they wouldn't be happy in Charlottesville if they were from Richmond, and people at the university would take it as a step down if they moved here. The only case that I can think of is Bill Ham, who was recruited from the university, and this was probably one of the greatest acquisitions that we ever made.

Setting Up a Research Effort

Guerry: We had some real good fellows, in the laboratory in particular. I've mentioned Walter Geeraets, whom I had recruited. He ran the entire department and did a very good job until Rod MacDonald came along. Prior to Geeraets, I had recruited Wolfgang Lieb as head of research. Geeraets' wife, Ragnet, was also a member of our department and of the Department of Anatomy. She did some good basic embryological research.

Hughes: How did Dr. Lieb's recruitment come about?

Guerry: I was looking for somebody to set up a laboratory and Lutz [Ludwig von Sallmann] knew that I needed a researcher for my lab. Lutz, by the way, liked to be called Lutz, and not Solly. Thygie always called him Solly, and it used to—it didn't infuriate him because he was not the kind of man that would be infuriated by anything. He had the most beautiful disposition of any chap I ever knew and was a real gentleman to the manor born. But he said to me, "Please call me Lutz. I love to be called Lutz. I don't like Solly." [laughs]

Hughes: Dr. Thygeson to this day calls him Uncle Solly.

Guerry: I talked to Dr. von Sallmann—or Lutz—and I told him that I wanted somebody to run the research effort, and he said, "I think I know the very man for you. He's a young man now working at Hopkins as a fellow in the Wilmer Eye Institute. He would be ideal for you because he's already got an ophthalmological degree and he's an excellent laboratory man. Why don't I put you in touch with [Wolfgang] Lieb?" So I got in touch with him. He spoke beautiful English, and I asked him if he'd be interested. He said he'd like to come down and look over the situation, which he did. He was very much intrigued with it; he said he would like the job, and he came down and took over.

Hughes: When was this?

Guerry: 1957.

Hughes: What was he to do?

Guerry: We had been given enough space for laboratories and for an administrative office in the new building. I'd been administrating from my own office downtown.

Hughes: What type of research did you have in mind for Lieb to do?

Guerry: Basic and clinical research.

Hughes: Any particular projects in mind, or was that for him to determine?

Guerry: Well, I had a whole bunch of things that I was interested in at the time, and he had some ideas of his own.

Sharing Space With the Ear, Nose, and Throat Department

Hughes: Could we go back to those early days when you first arrived at the department and perhaps you'd describe the facilities?

Guerry: We shared clinical space with ENT. We would see patients at certain times during the day and they would see patients at other times. We shared nursing help and other help with the ENT department.

Hughes: Did that work out all right?

Guerry: Pete Pastore, who was a full-time man in ENT, wanted his own show and we wanted our own show, so it was really not a happy situation. But it was tolerable and it continued for several years.

Hughes: When did the schism come?

Guerry: That was in the early fifties.

Hughes: Did it make any difference that the nursing staff wasn't exclusively ophthalmology?

Guerry: Well, it did. You can't really run a good show with that sort of setup. I knew that and Pastore knew it and the powers that be knew it, but they didn't have the wherewithal to change it, nor did they have the will at that time.

Upgrading the Medical College

Guerry: Then Truslow began his stint as dean and that's when things really began to move.

Hughes: Was he a fund raiser as well?

Guerry: He wasn't much in the way of raising funds, but he knew people who could raise funds, and he stimulated people to do that sort of thing. He talked to the board of visitors about what we needed to do to bring this institution into its own. He showed them that they were running a second-rate school. He also told them that if they didn't get off their hunkers, they were going to be on probation again and they would lose accreditation. With that heavy cudgel over their heads, the board began to move.

Another thing, at that time, we had a fellow named David Hume, who, as I mentioned, was recruited by Truslow to head up the Department of Surgery. David had come to us from Boston,

where he had done a tremendous amount of work on kidney transplantation at the [Peter Bent] Brigham Hospital. He was one of the pioneers with the group at Brigham that started that ball rolling. David was a fireball. He, working with Truslow, really brought the institution out of the woods and into the light of day. He was interested in all kinds of basic research, and he recruited an excellent faculty.

Hughes: A remarkable change.

Guerry: Oh, it was unbelievable. And the chap really responsible for this was John Truslow. He finally stomped on so many toes, as so often happens with deans, that he finally wore out his welcome. He left us with regrets on both sides and went to Galveston. Incidentally, at Galveston he helped pull Galveston out of a morass and was responsible for making that a grade-A institution.

I had my problems with David Hume, though. We in ophthalmology were a division under the Department of Surgery, and I wanted an independent department. Ophthalmology had always been under surgery. We were beginning to bring in a lot of our own funds, and Hume was taking all of our funds and combining them with the Department of Surgery's funds. We were getting the short end of the stick.

I was finally able to get out from under him by going to Dr. William T. Sanger, who was head of the medical school at the time. I told him, "Dr. Sanger, we're not ever going to get anywhere if we're a division of surgery. We are being held back by surgery. Bless Hume, he's done a superb job, but he figures that ophthalmology and other medical specialties are surgical."

Hughes: And Sanger saw that?

Guerry: Yes. Then he said, "Absolutely. You're exactly right and that's what everybody tells me. So I'll write Hume a letter." After clearing this with the board of visitors, he wrote Hume a letter and told him that at such-and-such a date the Department of Ophthalmology would be autonomous. For a short time after that, I got dirty letters from Hume about "Your charts are in arrears," or something else demeaning. Finally, I called him up and I said, "Dave, you run your department and I'll run mine." He said, "Well, what do you mean?" I said, "Well, you got a letter from Dr. Sanger." "Oh," he said, "I didn't pay any attention to that." [laughter] I said, "Well, we can't continue like this."

So I went back to Dr. Sanger. I said, "Look, I just talked to Dr. Hume and he said your letter didn't make any difference; he's

still going to run ophthalmology. Will you get up in the next faculty meeting and tell them that he is no longer in charge of ophthalmology, I am?" So he did; he got right up and said, "I just want to announce to everybody—most of you probably know it, but if you don't—Dr. Guerry is the professor of ophthalmology and he is running his own department, and it is not subservient to surgery and is no longer a division of surgery; it's autonomous. Does everybody understand? Do you understand, Dr. Hume?" [laughter] Hume didn't say a thing. [laughter]

We didn't have any more problems after that. He attended to his charts and I attended to my charts. Incidentally, he was about 620 behind and I was about 12 behind. [laughter]

Mrs. Guerry: At one point, you wrote him a little note and said, "Dear Dr. Hume, it's come to my attention that you have so many charts in arrears."

Guerry: Yes, "Time you get your charts in order." [laughter]

Mrs. Guerry: They were good friends away from MCV, and each admired the other.

Guerry: Poor soul, he ran into a mountain flying his own plane in California and was killed. I don't know how the guy kept his schedule; I don't think he slept more than two hours. He was constantly on the road, speaking, and going to conferences, and doing this and doing that. He figured that the airlines were too slow for him. So he got his own plane.

Mrs. Guerry: He had problems with his plane in Los Angeles and had it serviced. He was running behind schedule. To keep his schedule, he felt he had to fly at night.

Guerry: He never even got out of the environs there; he ran into a mountain right at dusk.

I'd driven to a medical meeting in Philadelphia and was on my way home. I was listening to the radio when I heard, "Dr. Hume, the brilliant head of the Department of Surgery at the Medical College of Virginia, was killed this afternoon." Golly. I had to pull off to the side of the road there for a minute or two. It kind of shook me up and I shed a few tears. I drove the rest of the way home more slowly.

Hughes: It sounds to me as though Truslow did some marvelous things.

Guerry: No question; he was responsible for getting the full-time faculty. Nobody realizes the real service that Truslow did.

Hughes: Did you have any problem, because you were a small department and because you were part-time, standing up for what you needed when you faced the other chairmen?

Guerry: You would think maybe I would, but after we got things settled with Hume, I didn't have any more problems. We had good relations with Truslow. Because Truslow knew of my relations with Columbia and all of our mutual friends up there, I was sort of the fair-haired boy. He saw that I got what I needed.

Proposal for a Research Institute

Mrs. Guerry: You had a major problem later when the administration was not interested in your raising money and having a separate institute.

Guerry: That was after Truslow left. We already were making overtures to Research to Prevent Blindness. David Weeks came down at my behest and after looking over the situation felt that we were an ideal place for them to supervise fund raising for a real research institute, a department with a real research institute. I guess Kinloch Nelson had been dean for about a year. The new president of the Medical College, Blackwell Smith, who was not an MD but a pharmacist, had taken Dr. Sanger's place. But Dr. Sanger was running things behind the scenes as it were, and he had picked Blackwell Smith to take his place.

Hughes: Had Sanger deliberately chosen a man without an MD to be dean?

Guerry: Yes, I think because he himself was not an MD, and also because he wanted to continue to run things, and if he had put an MD in there, he wouldn't have been able to do this. So that's why he put Blackie in there. He was pleasant and affable but a poor administrator.

Dave Weeks came down and we had a session with Kinloch Nelson and Blackwell Smith. After Weeks left, we kicked it around for about a week and finally I went in and asked Kinloch, "How about it?" He said, "We're going to have a big fund-raising drive for the whole Medical College next year and we don't want the damn ophthalmological tail wagging the whole Medical College dog, so we'll put that on hold." I called Dave Weeks and said, "We don't have anything going here, buddy. It looks as

though it's been torpedoed from on high." He said, "Well, I think it's a shame, because it's a natural." Research to Prevent Blindness, though, continued to generously support our research program.

Hughes: There was nothing that Weeks could do from his end?

Guerry: No.

Hughes: What about equipment when you arrived? I'm assuming that Columbia had just about everything. Was the Medical College a comedown?

Guerry: It was. I really had to start from scratch. Hudson Titmus was running the Titmus Optical Company in Petersburg. These people had built a glasses manufacturing plant, and one of the better ones. They were competing on the national level with American Optical and Bausch & Lomb, but most of the glasses that they made were for optometrists. Titmus was interested in some prestigious advertising for MDs in the hope that he could break into the medical market. He set up the Titmus Fund for us, and with this fund we could buy pretty nearly anything we needed.

Hughes: How much money did it amount to a year?

Guerry: Our department got somewhere between $50,000 and $75,000 a year, which was a tidy sum for that sort of thing at that time. Plus Titmus could buy instruments and equipment that we wanted with his company's courtesy discount.

Hughes: So you had the latest instruments and equipment.

Guerry: Yes, we had anything that we wanted.

Herbert Wiesinger

Hughes: Tell me about Dr. Herbert Wiesinger.

Guerry: Yes, Herb worked at MCV both clinically and in research for several years and then became a full-time partner with me and Richard Williams. He and Burkhardt Pillat came from Vienna for a Wilmer meeting. They knew through Al Reese that I was recruiting. Herb had spent a year with Al on a Fulbright Fellowship doing research on retinopathy of prematurity.

Pillat's old man [Arnold Pillat] was head of the Second [University Eye] Clinic in Vienna. Burkhardt and Herb were

best of friends. Both of them had gone through the residency there. I suggested, "Why don't you all come down to Richmond and look my little show over and see if you might be interested in coming to Richmond and MCV? With your background, we'd have a place for you if you are interested. If you get your curriculum vitae together, I can talk to the people down there."

They both came down and visited, stayed at home with us for about a week. Then they went back to Vienna. I told them when they left, "As soon as you get back and check on things, let me know." After about a month, I got a letter from Pillat. He said he would love to come, but his father wanted him to stay over there. He'd gotten interested in doing basic pharmacological research in some field other than ophthalmology, and he was so interested in it that he didn't think he wanted to leave Vienna at that time. He also didn't want to do ophthalmology, so he wouldn't be able to help me. But he said, "You'll be hearing from Herb because I think he is interested."

About two or three days later I got a letter from Herb that said, "I would love to come over. What kind of a proposition can you make?" I told him we'd work out something satisfactory. Shortly thereafter, he came to Richmond and I put him to work at MCV.

Mrs. Guerry: After about a year at MCV, he went back home, married Ilse, and brought her to Richmond. He was full-time at the Medical College for several years and then went into private practice with you and Dr. Williams.

Guerry: Yes, that's right.

Hughes: How did that work out?

Guerry: He was full-time down at the Medical College for two or three years. He was working in our department, and we had not gotten the Titmus funds at that time, but the Medical College paid his salary. He was doing full-time research in what little facilities we had. He did a very creditable job. Finally, I needed some help uptown in the ophthalmology practice and he was getting tired of doing full-time academics. So I said, "Why don't you join me and Richard uptown?" That's when we brought Wolfgang in to do research.

You were asking about the mechanics of how the practice worked. The first year you were paid a given sum, and the next year the two years were added together and the average determined. This was the percentage of the total income of the partnership after all

other expenses. This would work on a three-year scale, and the previous year would be dropped. In a nutshell, you drew the percentage you earned as determined by the last three years, less expenses.

The reasoning behind this scheme was that if one had a bad year, it would not be devastating. It worked very well for us. Richard Williams had come in on a formula like that and then Herb came in after a year or so. My son Ken [Richard Kennon] Guerry came with us several years later and stayed with us for four years. He left us to run his own show which was full-time retina. He did an excellent job with us, but we didn't need a full-time retina man.

Hughes: Were there certain cases that you would take and certain cases that Dr. Wiesinger would take?

Guerry: Not really. The truth of the matter is that when a partner first started out, he would do just as Dunnington and the boys did in New York. The boys would work the cases up just as Richard did when he first came in with me. He would work the new cases up, take the history, do a general ophthalmic examination on the patient, who would then come in to see me. I would look the patient over and ask a few pertinent questions and find out what needed to be done, and do it, if this was my patient. But they got credit for any patient that had come to see them and not me. We had ways of dividing it up so that if they saw a new case that was mine and worked it up, they got a percentage for working it up. They were given full credit for their own patients. After you added it all up, we divvied the earnings up according to the formula.

Hughes: How did you fit surgery into this scheme?

Guerry: If they were my cases, I'd do them. If Richard or Herb had a case, they did it. But I would say for the first couple of years that Richard was with me, I was doing probably ninety percent of the surgery and he about ten percent, and then he gradually worked into it. But he never was interested in doing very much surgery, so I continued to do the greater part of it. Herb was more interested in surgery and had a large surgical practice. He left us two years before I retired, and he set up practice across the river close to his home and with no long commute. We hated to see him go as he had been a good loyal friend and partner. He has continued to do well.

Hughes: Did you have days when you operated?

Guerry: Yes. We had a regular schedule. We operated at the Medical College for a while until they built the new eye hospital, which was not associated with the Medical College, although it was built in the Medical College complex.

Attempts To Affiliate With Richmond Eye Hospital

Guerry: We hoped that we would be able to work out an affiliation with Richmond Eye Hospital so we could do all of our ophthalmic surgery there. But it has never come to pass even to this day. It's still on hold, much to the chagrin of all concerned.

Mrs. Guerry: Twenty-five years later!

Guerry: Twenty-five years later we're still trying to work it out.

Hughes: What's the stumbling block?

Guerry: I was on the staff there and helped them raise funds for the hospital, but they never wanted the Medical College to have anything to say about how they ran their show. Period.

Hughes: The private practitioners?

Guerry: Right. We got along fine personally, but the words "Medical College" were an anathema to them, and are until this day. They say, "We don't trust you. You're trying to take us over and you're going to tell us how to run our show and we want to run our own show." And MCV responded in kind.

Mrs. Guerry: The MCV resident staff is covering the hospital now, isn't it?

Guerry: Yes.

Mrs. Guerry: The eye hospital actually gets its heat from the Medical College.

Guerry: Yes, in more ways than one. As recently as eight years ago, Tom Duane and Ed Norton at the behest of me and my son Ken, and working with the powers that be at the eye hospital, came to town to evaluate the situation. Ken had trained with Ed Norton and, I think, he was largely responsible for this visit.

The eye hospital staff and the staff at MCV decided, all of us together, that we'd have these two look at the situation and tell us how we might get the show on the road. They spent about

three days looking over everything—the Medical College, the eye hospital, and the community in general. They wrote an extraordinarily lucid report that simply said, "There's no reason why you all can't have one of the best eye centers in the country—you've got all the facilities—if you'd just get your act together." [laughs] But they never told us how to get our act together. I don't think they changed any minds at all. One of the big problems was that just about the time we'd have things worked out, we'd get a new dean at MCV.

Hughes: And you'd have to start all over.

Guerry: Start from the beginning. The half-life of a dean is about a year, and a whole life was rarely longer than two years.

Mrs. Guerry: Five years before Tom Duane and Ed Norton came, "Dud" [Dr. Goodwin M.] Breinin was chairman of a committee of experts.

Guerry: That's right. He had done the same sort of thing.

Mrs. Guerry: The Richmond Eye Hospital was built originally with a double foundation. The second foundation is for a second tower for a research facility.

Guerry: Now the problem is that you don't need all the surgical ophthalmic beds because so much ophthalmic surgery is done on an outpatient basis nowadays.

Hughes: Dr. Duane, who was very much involved in the design of the new Wills Eye Hospital, mentioned in his oral history that the Richmond Eye Hospital did far better than Wills in anticipating the move towards outpatient surgery. On the other hand, the Scheie Eye Institute made no accommodation for the trend towards outpatient surgery. I guess the writing on the wall just was not seen at that point.*

Guerry: That's right; it wasn't. Most people didn't want to see.

Hughes: Dr. Duane spoke with some envy of the comparative ease with which the Richmond Eye Hospital adapted.

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* See *Harold Glendon Scheie, MD: Ophthalmic Surgery and the Scheie Eye Institute.* Ophthalmology Oral History Series, A Link With Our Past. Interviews conducted by Sally Smith Hughes, PhD. The Foundation of the American Academy of Ophthalmology, San Francisco, and The Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1988.

Guerry: But that didn't have anything to do with the Medical College affiliation. The eye hospital was just serving the public through their private physicians.

Hughes: Who was responsible for predicting the trend towards outpatient surgery?

Guerry: I certainly didn't, and I'm certain none of the old guard thought that we were going to go that fast into outpatient surgery.

Mrs. Guerry: You were asking why the eye hospital did anticipate this trend. I think Ken Guerry, having come from Miami [Bascom Palmer Eye Institute] recently, was one of the people who did a great deal in anticipating this.

Guerry: He was prognosticating way ahead of anybody else, about a decade, having come from Miami.

Hughes: So the design for outpatient surgery was built right into the original plans for the hospital?

Guerry: No, but the way that the hospital was built, it was a simple matter to make the changes.

Hughes: That wasn't just chance?

Guerry: I think some of it was happenstance and some of it was probably prophetic. I don't think anybody can just flat out say that we knew that's the way it was going to be.

Hughes: Did you have a hand in the design of that hospital?

Guerry: Very little. As they were drawing the plans up, I was cognizant of what was going on and did make some relevant suggestions.

Mrs. Guerry: As chairman of the department across the street.

Guerry: Right. And I told them some things that I thought would be helpful in case we ever did unite.

Surgery

Hughes: Of all the things that you have done in the realm of medicine where does surgery rate?

Guerry: I've loved my ophthalmic surgery; I'd rather do ophthalmic surgery than any other kind. But I must say that if you had cut my surgery off and I never did another case, I would have survived. I love doing surgery, and on a scale of one to ten, I would probably give me a seven on surgery, maybe a six on research, and general ophthalmology probably about a six. So surgery was a little bit ahead of the others. There are some people that if they're not cutting, they're just not happy. I was never one of those. I could have practiced in the laboratory and have been happy. I could have done just plain general office practice and still have been happy. But the thing that really makes your blood race, the icing on the cake, is surgery.

Hughes: Is it the sheer drama of it?

Guerry: I think that's some of it. Also the fact that you can see good results quickly. With so much of medical ophthalmology it takes so long to determine whether you're doing good or not. But surgery, you either do good or do bad and that's it.

Hughes: Was there a particular type of surgery that you liked better than others?

Guerry: I like intraocular surgery, what's known today as anterior segment surgery, more than anything else. Glaucoma now is a specialty unto itself, but I like glaucoma surgery, and I like cataract surgery. I did a lot of retinal work, but it didn't really suit me to specialize in retina, because I wasn't that interested in it. Cataracts and corneal grafts were more to my liking. I'd worked with Castroviejo and I was a good corneal surgeon from the very beginning. That was unique in those days because most people hadn't had a whole lot of corneal surgery. So I had a real good background and had a head start. I did muscles for a long time, and then I finally gave that up, along with pediatric ophthalmology.

There's a funny story about the crowning blow that made me decide to give up my pediatric practice. One day, I was trying to measure the muscle balance on a little kid about four years old. He was a holy terror and he was thrashing around and raising hell. I was trying to get him to fix on the fixation light so that I could do a cover test on him. I was rested on one of those jiggly flexible stools, and all of a sudden I lost my balance and fell off on the floor, just flat on my fanny. The mother said, "Oh, look at the funny doctor trying to entertain you, Johnny." [laughter] That did it. I went out to my receptionist afterwards and I said, "Don't make any more appointments with kids. I've had it up to here."

[laughter] So after that I only did muscles on adults for a short time and then turned all the muscle work over to my associates, Dr. Williams and Dr. Wiesinger.

Hughes: Dr. Ferguson told me that he thought the department was clinically oriented. Would you agree that that was the view that predominated?*

Guerry: As a matter of fact, I wasn't chairman when he finished up his residency. But there's no question about it that we were clinically oriented, but we also did our share of research when I was there, as we've already mentioned. It was a clinically oriented program.

Hughes: Did you expect quite a bit of the residents and the nurses?

Guerry: Oh, absolutely. We turned out good residents. Wiesinger was a good surgeon. Richard was a good surgeon, but he was not particularly interested in surgery. He always said, "I can take it or leave it." He loved contact lenses and still does, and general practice. He was a good, competent surgeon, but it didn't mean much to him. We had two superbly trained surgical nurses—Mary Hitt and Juana Fagaldi—who made excellent surgery not only possible but enjoyable.

Hughes: Did you have criteria for when a resident was ready to operate?

Guerry: Absolutely. We started them off on rabbits, and just ran the gamut from there. We had real good people working with them, and a lot of our attendings worked with them also in addition to the full-time people that we had. This was good for both parties.

Hughes: It was by consensus that a resident moved from animal work to surgery on patients?

Guerry: Yes. And if you had a resident that was slow, you would take extra time with him. We'd say, "We're about ready to turn you loose, but we're not going to do it yet because we think you need to spend a little more time on this." They weren't unhappy about that, because most people who have a problem are the first to realize it.

Hughes: Did you ever have any reluctance to turn one of your patients over to a resident?

Guerry: I've never done that except under circumstances where we were operating and I'd have to leave. I always did my own surgery.

* Telephone interview with Dr. James G. Ferguson, April 4, 1990.

Hughes: The residents, then, were operating on the clinic patients?

Guerry: Yes. I never had any nonprivate patients. I always did my own surgery. I thought that's what patients paid me for. [laughter] But the clinic patients, the residents did, and we scrubbed with them until they were highly trained, and even then we'd scrub with them in very difficult cases.

Patient Consent

Hughes: What went through your mind when there was a new procedure and you were considering trying it?

Guerry: Well, we wanted to be sure that the patient was not at risk—this was our first consideration—and that the patient was fully cognizant of what we intended to do, and that it was an experimental procedure or one that had just been done a few times. If they wanted us to do it and they understood that we were going to do the best we could, then we were happy to do it. But only with their understanding and consent in writing.

This is the way we felt even when we were doing our work with the experimental [intraocular] lenses way back when. We told patients, "This is a new thing, but you've got a problem here. This is a modality that has been used other places, and some of this is new here and the material that we use may be different, but the procedure is thus and so." And we would give them a full rundown on what was to be done and what might be expected—even in those days. As a matter of fact, the Medical College and the American College of Surgeons had consent forms that had to be signed. These forms spelled things out.

Hughes: Were you doing this even before the consent forms of the American College of Surgeons came in?

Guerry: Yes. We had our own consent forms. Now, when we were doing experimental work with vitamin K at the University of Virginia in the old days, we didn't tell anybody anything. We never thought anything about it because we thought that the great good we were doing far outweighed the slight risk.

Hughes: Do you think it was malpractice that raised consciousness?

Guerry: I don't think there's any question about it, that and the great burgeoning of lawyers.

Mrs. Guerry: I have a very different impression of your vitamin K babies. You had watched seven or eight babies die—bleed to death—and it was these babies who were bleeding that were given vitamin K. When you selected cases for intraocular lenses, those early cases were selected *very* carefully.

Guerry: Yes, absolutely. We were doing prothrombin times on the normal babies.

Mrs. Guerry: A prothrombin time was a recognized laboratory procedure.

Guerry: You had to tap the fontanelles to get the blood, and we never drew up a protocol for the parents to see stating that we were going to stick a needle in the child's head and get some blood out. Nowadays, you'd have to, according to law. We didn't think at the time that we could do any harm. That's the way we really looked at it. And we were lucky enough not to have any problems.

Hughes: When did you begin to use consent forms?

Guerry: I would say we started using consent forms just about the time that I took over the department at MCV.

Hughes: That was certainly before the government stepped into the picture.

Guerry: The American Medical Association and American College of Surgeons were at that time beginning to move in that direction, and I think that most of the institutions were beginning to do the same thing.

The Doctor-Patient Relationship

Hughes: Please comment on the type of relationship you sought to establish with your patients.

Guerry: Well, I think either you've got it or you haven't got it in relationships with patients. I think I am lucky enough to be one of those individuals that likes people, and people like me. Certainly, the majority of my folks liked me and came to me, not just because of my personality, but that didn't hurt me any.

Hughes: Would you characterize the relationship as friendly?

Guerry: No, mutual respect.

Mrs. Guerry: We get dozens of calls now with DuPont retired. "I've been to see Dr. So-and-so as you suggested, but I just want to tell you what he said and what I said..."

Guerry: "...and what do you think?" [laughter] And the truth of the matter is, I'm flattered. I love to hear how they're getting along. And in retirement, I miss seeing my patients more than anything else.

Hughes: Some physicians, as I don't need to tell you, have a very formal relationship with their patients.

Guerry: I could not practice medicine that way.

Mrs. Guerry: DuPont came home from the office knowing who played golf and who fished and who had three grandchildren. He might not know their names, but he could describe their eye grounds and tell you all about their interests and their lifestyles.

Guerry: I did that not for promotional reasons but because I just liked people that much.

The Resident Training Program*

Structure

Hughes: Please tell me how the resident training program at MCV was structured.

Guerry: Our training program was structured pretty much along the lines of the one at Presbyterian [Hospital in New York], where I trained. We didn't have the basic training that they had at Presbyterian, but we did have a lecture program that all of our residents were required to take. In that, we covered pathology and various clinical subjects. We would send our residents to the basic program in Maine.

Hughes: The Lancaster course?

Guerry: Yes, that's right. I don't think that our teaching program really was much different from those at the other institutions in the country.

* This discussion of the residency training program, recorded on April 13, 1990, has been incorporated here.

Hughes: Did you ever contemplate setting up a basic sciences course?

Guerry: We thought about it, but it was not in the cards for us to do that. It just would have been too much of an outlay of money and space, which we didn't have.

Hughes: Who was doing the lecturing?

Guerry: Most of our attendings. We had some very good people in town. What little bit we had insofar as basic sciences went was taught by the chap who ran the research division of the department, namely Wiesinger, Lieb, or Geeraets. Also, anybody who had any bent towards ophthalmic research was offered the opportunity to do a project. A fair number of residents did projects that resulted in a publication.

*Hughes: Dr. McNeer told me yesterday that he did a research project on photocoagulation.**

Guerry: That's right. He, by the way, was one of our better residents and has distinguished himself by becoming an internationally recognized motility man.

Hughes: What were you looking for when you selected residents?

Guerry: We were looking for people interested in ophthalmology as a discipline, those not just going into it from the pecuniary angle. That's awfully hard to tell, but you can just flat out ask them. Most are pretty honest, and some would say, "Yes, I'm interested in both sides of it." We wouldn't disqualify them if they wanted to earn a good living or if they wanted to go into general practice. We wanted to turn out well-trained ophthalmologists from a general standpoint. A fair number of our residents, though, went to other institutions and took postgraduate training. We had a few that now head up departments—Dr. John Barber in Galveston, Dr. Roger Hiatt in Memphis, and Dr. James Ferguson in South Carolina. We've had several other distinguished ophthalmologists. Dr. Dunbar Hoskins of San Francisco went through our program, and he's recognized internationally as a superb glaucoma man. He went from our program to work with Dr. Bob Shaffer. He has also distinguished himself with his work in and for the Academy.

* Interview with Dr. Keith McNeer, Richmond, April 12, 1990.

NIH Training Grant

Hughes: I asked Dr. Ferguson why there was a collection of stellar beings that graduated from the department. He thought that it might have something to do with the NIH grant, which attracted people interested in research and consequently with academic leanings.*

Guerry: I think that definitely had its effect on people who went into research and into administration too. That wasn't the only reason, but certainly I think that might have been one of the clinchers.

Hughes: Do you remember what years you had that grant?

Guerry: I couldn't tell you that to save my life right now. We had it for a long, long time.

Hughes: Was it fairly common for a department to have an NIH training grant?

Guerry: Well, the funds were available, but they didn't just parcel them out to everybody. They were a bit persnickety about whom they gave them to. You had to have a good program.

Hughes: What hospitals did the residents train in?

Guerry: When I was chairman, the residency training program was entirely at the Medical College. But the three residents at McGuire Veterans Hospital, where Dr. Edward W. Perkins was chief of the eye service, rotated through our program, and our residents spent some time at Veterans. Bill Perkins was one of the best trained graduates of the New York Eye and Ear Infirmary and was in charge of the eye section of the 45th General Hospital from MCV in World War II.

Some five or six years after I left, Dr. Perkins gave his job up at the Veterans, and the chairman of the Department of Ophthalmology at MCV took over the Veterans eye department in toto. I must say that I don't think this system under our department has worked any better, as far as the residents are concerned, than when Perkins was at the Veterans. Perkins and I worked well together; we had no problems. It was really almost the same show.

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* Telephone interview with Dr. James Ferguson, April 4, 1990.

Teaching

Hughes: How would you characterize your teaching style?

Guerry: Well, I had my lectures to give along with everybody else, but I think most of the teaching I did, and where I think I was most effective, was on a one-to-one basis—demonstrating patients to an individual—and also in surgery, scrubbing with residents and showing them how to do procedures.

Hughes: What was your primary goal as a teacher?

Guerry: I think the goal of any good teacher is to have the individual you're teaching learn what you want him to learn, the basic facts in your particular discipline. I wanted the resident to know as much as I did. Preferably he'd learn more than that and could go on from there.

Hughes: Did you try to instill an approach to a patient, what steps a physician should take?

Guerry: Absolutely. That should be a key part of any program. The truth is that most people have a pretty good idea by the time they get into a residency program about how to approach a patient. What we did was to apply not just the general rules but the specific rules of our particular discipline of ophthalmology. There's not a whole lot of difference; the general approach is pretty much the same. But there are some specifics that appertain to our particular discipline. Those were the ones that we emphasized. We would show them the techniques that we felt were necessary in diagnosing, in treating, and in operating.

Hughes: What did you expect of them in terms of performance?

Guerry: I think all of us who are in the teaching discipline try to bring out the very best individual talent. If you realize that certain individuals are not gifted in certain ways, you must respect their limitations and not try to teach them to do things that they're not capable of doing. Some people, for instance, have just got clumsy hands. If we realized that or if their temperament was such that their surgical judgment was impaired, we wouldn't throw them out of ophthalmology. We'd just say, "Look, you'd better realize that surgery is not your forte. If it's not your forte, you're going to cause problems that will lead to lots of heartaches. Our strong suggestion is that you go into one of the medical subspecialties in ophthalmology."

Every once in a while you run into an individual who just can't hack it in surgery, and you say, "We can't let you operate alone; we just can't turn you loose." Occasionally, one would get upset and go somewhere else. Usually, there are disasters when they do that. Most people know their limitations.

Hughes: What was your reaction when you sensed that a resident wasn't working at his optimum?

Guerry: We'd have a one-on-one chat with him or her and say, "You're not doing what you should be doing. What's your problem? We'd like to help you with it." Once you identified the problem, you could be their father confessor and you could help them out of the morass that they'd gotten themselves into.

Hughes: Did you have that experience?

Guerry: Well, we had an occasional one. Every department has this, no matter how careful you are and what great recommendations you get. You do the best you can for them, but you've also got to think about the department. If somebody is psychotic or has dispositional problems, you just have to sit down and frankly say, "Look, I think you'd better go off, and then when you get yourself together, come back." We had a few who left the program for a while, and we'd say, "We'll have a place for you when you settle down and get all your difficulties resolved." Most of them who come back do well.

Hughes: How would you characterize your relationship with your residents?

Guerry: I think my relationship was always good. I've had a fair number after years say how much they appreciated having been in our department and the things that we had done for them. They say that if they had to do it over again, they'd like to do the same thing, and that's about as nice a thing as anybody can say to you.

Occasionally, you'd find an individual that didn't get along with somebody in the department, and I had a few that didn't get along with me, and I with them. [laughs] In those cases, we'd say, "We'll just work this out the best way we can." Everybody has personality clashes like that. I don't think I had any more or any less than my share.

Hughes: Did you ever lose your temper?

Guerry: Yes, I've lost my temper, but not to great degree. I never threw instruments or had a tantrum, but I have on occasions dressed people down, not just the residents, but nurses and others who

have done something unforgivable. But, by and large, I was able to control my temper pretty well. I can't think of anybody that we had in the department that was given to undue temper tantrums and emotional displays.

Hughes: What was the atmosphere in the operating room?

Guerry: You find all types in the OR—the jolly, the loquacious, the quiet, the bombastic, the orator, the silent—name it and you can find it. We always felt that the patient deserved our very best and that if you were giggling and carrying on in the operating room, you just couldn't give your patient the kind of attention he deserved. So we always insisted on good decorum. We would talk about what we were doing and why we were doing it, but there would be no extraneous talk, only the talk necessary to communicate properly. Full discussion comes later, outside the OR.

That is particularly important in this litigious age where so many of our patients are being done under local [anesthesia]. You think these people don't know what's going on in the operating room; they know everything that's going on. If something does turn out wrong, it's the first thing that the lawyer's going to latch onto. So early on, we taught all our residents to behave with proper decorum in the operating room by not saying anything out of the ordinary.

Grand Rounds

Hughes: Please describe grand rounds.

Guerry: Our grand rounds were copied from the grand rounds at Presbyterian when I was there; we always had them on Wednesday mornings. Ever since I was chief at the Medical College, they've had grand rounds on Wednesday, usually starting at eight o'clock. You'd have a group of patients that the residents had selected from the clinic or that the attendings had picked up in their practice. They thought these patients either would be of interest to the residents or that they could get some help from the teaching staff with a particular case. These patients were brought to the clinic, and all of the residents and attendings went around and looked at the patients and discussed them amongst themselves. Then we'd finally adjourn to the classroom where a resident presented each case. The case was discussed in depth by both the attendings and most of the staff. On occasions, somebody at grand rounds would have a paper that he was going to give at some meeting and he would give us a preliminary reading, or perhaps one of the residents would

present data on some research work he had been doing—that sort of thing.

So grand rounds has various aspects, but by and large it's a great teaching device. I think the residents and the attendings get a lot out of it. If you have a good show, it helps tremendously with the town-gown relationship.

Hughes: Did quite a number of the ophthalmologists from the community attend?

Guerry: A large number, and a fair number of them still do. I still go now and then.

Hughes: Did they participate as actively as the residents?

Guerry: Oh, yes. Not all the people in town but the ones that faithfully attended did. They presented a lot of material, and they were very, very interested in the program. When they went back into town, they would spread the gospel about what was going on at grand rounds and would encourage others to come down. I remember how great the rapport was between Ed Norton's program in Miami and the town people. That was also true in New York in the old days. I think grand rounds are one of the best methods of teaching the residents and of keeping the ophthalmic community current.

Hughes: How much space in the curriculum does ophthalmology have at MCV?

Guerry: I don't think any department ever has as much space in the curriculum as it would like to have. We have the idea, or we wouldn't have gone into it, that ophthalmology is sort of a superspecialty. But in the scheme of things in medical school, you have to realize that ophthalmology is really low on the totem pole as far as the medical school itself is concerned because the big departments like surgery and medicine and pediatrics and obstetrics are the disciplines where the big effort is as far as funding goes. You have to hold your own as best you can and not let the big services grind you down.

Hughes: Several people have referred to you as a role model for ophthalmologists. Were you conscious of being a model?

Guerry: No, I never was, and I'm delighted to know people feel that way. That's about the nicest thing I've had said about me in a long time. I always tried to do what I thought was right. Most of the people that I've dealt with in ophthalmology could be considered

role models because most that I've known have been dedicated people, dedicated to taking care of patients the best possible way. Researchers and administrators have been dedicated to their work as well.

Fingerprintlike Lines in the Cornea*

[Interview 4: April 10, 1990, the Guerry home outside Richmond, Virginia]

Hughes: Your paper on fingerprintlike lines in the cornea was published in the American Journal of Ophthalmology *in 1950. Could you describe what you saw?*

Guerry: One day, a patient came in and I did a routine examination under the slit lamp. We always did routine exams with the slit lamp; that was part of every good ophthalmologist's examination and still is to this day. I suddenly realized that there were some peculiar wavy lines that were indistinguishable by direct illumination. But with illumination under the microscope at an oblique angle, these lines could be seen. It looked just as though somebody had taken their thumb and made a print on the cornea. I was intrigued because I'd never seen anything like them. They didn't affect the patient's vision and they occurred in both eyes. So I went to the library as soon as I could, and I checked all of the references to corneal lines. I looked them up in [Alfred] Vogt's atlas on slit-lamp exam.** Nothing in there like it. I had decided that I would probably publish this, but I wanted to get another case, if possible.

After a couple of years, I ran into the same thing again. In the meantime, the first case had developed a herpes dendritic ulcer of the cornea, which was not related to the lines in the cornea. The patient was referred to Dr. Dunnington in New York for possible treatment because we were afraid we were going to get into difficulties. So while the patient was there, I told them about these peculiar-looking lines and asked them if they had ever seen anything quite like it. Dr. von Sallmann, Dr. Dunnington, and Dr. Reese took a look, and none of them had ever seen anything comparable. So they suggested I go ahead and publish this; I wrote it up and published it, and since that time the lines have been known in the literature as Guerry's fingerprint lines. By

* Guerry D. Fingerprintlike lines in the cornea. *Am J Ophthalmol* 1950; 33:724–726.

** Vogt A. *Lehrbuch und Atlas der Spaltlampenmikroskopie des Lebenden Auges*, vol. 1. Berlin: Julius Springer, 1930, p. 265.

the way, I had Gus Bethke make a drawing illustrating the lines since they are almost impossible to photograph.

Dr. Dunnington curetted the cornea when the herpes was present and treated the lesion with iodine. Immediately thereafter, the fingerprint lines disappeared, but they came back, and nobody could explain that.

These lines are somewhat similar to the ones described by Cogan in a paper on microcystic epithelial dystrophy of the cornea.*

Hughes: But the maplike configurations that you saw were quite different, were they not?

Guerry: They were entirely different. In addition to the little grey spots which Cogan had described, the maplike configurations were very irregularly shaped, gross-appearing lines, as compared to the fingerprint lines. These, Cogan had not described. When I reported this at the AOS,** Dave Cogan came up to me and said he was just flat-out embarrassed because they had never seen these maplike configurations. Since I had talked about it, he had gone back and looked, and they were there in all of their cases. So the syndrome really had two parameters: the lines which I described and the little dots that he described. In the literature, it's usually described as the map-dot dystrophy of Cogan and Guerry.

Hughes: Why do you suppose that Dr. Cogan didn't see them?

Guerry: [laughs] That's what he asked me, too. He said it was plain as the nose on your face once you saw them. He said that he didn't know why he hadn't seen them, because they were obviously there.

Hughes: Does anybody have any idea what causes them?

Guerry: Nobody has any idea, but they're apparently just an incidental thing and don't cause any problems. In the cases with the dots that Cogan described, a lot of those patients had complaints of discomfort. We found that following cataract surgery a fair number of patients would have some problems with the epithelium sloughing for some days afterwards. On some occasions, if they got real uncomfortable, we actually would curette, just as we had in the days when we were treating herpes.

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* Cogan DG, Donaldson DD, Kuwabara T, et al. Microcystic dystrophy of the corneal epithelium. *Trans Am Ophthalmol Soc* 1964; 62:213–225.

** Guerry D. Observations on Cogan's microcystic dystrophy of the corneal epithelium. *Trans Am Ophthalmol Soc* 1965; 63:320–334.

When it healed, the lines always reappeared, but the patients would be a lot more comfortable.

Hughes: Is there any understanding of the relationship, if any, between the cysts and the maplike configurations?

Guerry: When you look at them under the microscope, you find that these little dots in the basement layer of the epithelium will form cysts. These cysts actually have epithelium that has been desquamated as part of a central core, and then the surface epithelium will erode, not to the point where it will actually show staining, but it will erode, and the contents will be discharged to the surface. Then that particular dot will disappear and it will appear in another area, so they're constantly shifting their place on the cornea. It is now thought that all of these lines represent basement membrane pathology. Apparently, there is reduplication of the membrane, but the cause is unknown. It has been postulated that it is some sort of aging process.

Hughes: But still causing no problem to the patients?

Guerry: Not really, except a little foreign-body sensation. That's about the only problem that you have. And with these fingerprint lines, they don't have any symptoms at all. It's just an incidental finding. Nowadays, both conditions are classified as basement membrane epithelial disorders.

Return to the Institute of Ophthalmology at Columbia, 1951

Hughes: In 1951, you went back to the eye institute at Columbia, and according to your curriculum vitae, you were doing research on glaucoma.

Guerry: Yes, I spent three months up there doing some research on glaucoma. I was interested in measuring the intraocular pressure with a manometer and comparing the results that we got manometrically with the tonometric pressures to see exactly how accurate these manometric measurements were. We used the Sanborn manometer, which had been developed by the Sanborn people for studying pressures in blood and cardiac dynamics. In order to obtain a reading with a regular manometer, you put the cannula in the anterior chamber, and if you lost any fluid, naturally the pressure would drop. It is desirable to lose little or no fluid so that the pressure would be an accurate reflection of what the true pressure was. The way the

Sanborn machine is devised, there is no loss of fluid, so the pressure that we got was a true reading of AC [anterior chamber] pressure throughout an experiment.

Once we set up the machine, we could study the action of various drugs on the intraocular pressure. This apparatus lent itself well to pharmacological studies of different drugs. We were also able to use the Sanborn manometer at the same time that we were doing tonometry to find out exactly whether the tonometers that we were testing were working properly. At that time, about the only tonometer that was available was the indentation-type tonometer, the Schiotz instrument. The electronic one came out some years after that.

I did this work in preparation for my AOS thesis.* It's of some interest that when I submitted the thesis, I had written a complete history on the use of manometers. The history went back to the early 1800s and some of it was in Latin, and I had to translate all that to get it into the thesis. My history went up to the point where we did this work. When I submitted it, Jonas Friedenwald, who was on the thesis committee, wrote back and said, "Dear Dr. Guerry, you have submitted two theses. Which one do you want us to consider?" [laughter] So I told him if I had to make a choice, I would rather submit the one having to do with the recent experimental work and forget the historical; and thus the historical component was never published. I think it's a shame that they didn't publish it, because it really did tell you what had gone on in manometric work for a period of around 200 years.

Hughes: Why were you particularly interested in glaucoma?

Guerry: I was very much interested in glaucoma because, as I mentioned, we have it in our family. My father had developed glaucoma about the age of forty and had been controlled for many years with miotics. Dr. John Wilkie Jervey, Sr., who was his ophthalmologist, found that drops wouldn't take care of him and so he had Dr. Dunnington do trephines on both his eyes. He did very well for twenty-odd years, and then while I was a resident at the eye institute his pressure again got out of control in one eye, and Dr. Dunnington reoperated successfully. He lived to be ninety-one and had no visual field loss. His pressure was well controlled and he had no cataracts, and 20/25 vision with correction.

Hughes: How had you managed to take three months off to go to New York?

* Guerry D. The use of the Sanborn electromanometer in the study of pharmacological effects upon the intraocular pressure. *Trans Am Ophthalmol Soc* 1952; 49:525–555.

Guerry: My practice wasn't all that large at that time. I had been in practice about five years. Also, in the hot summertime I had had some problems with my atopic dermatitis and I needed to get out of the Richmond area. So I figured that was a good time for me to take off.

Hughes: Were you working independently?

Guerry: I was working under the tutelage of Dr. von Sallmann. He helped me if I had any problems, and with his encyclopedic knowledge of the literature, both the modern and the old, he also knew whether this had been done before and made sure that I wasn't barking up the wrong tree. He was of inestimable help in doing this work.

Hughes: The eye institute gave you laboratory space?

Guerry: I had laboratory space and animals.

Hughes: Would this privilege have occurred if you hadn't had that prior association with the institute?

Guerry: No. They're always happy to have their previous residents come back, and a fair number of them came back and spent some time doing basic research or sharpening clinical skills.

Hughes: Is there anything to say about the people who were at Columbia in 1951?

Guerry: The old eye institute was still going great guns in those days. Castroviejo was in his heyday doing corneal grafts. Al Reese, if not *the* number one eye pathologist in the country, was certainly among the first two or three. Dunnington was developing an international reputation as an intraocular surgeon, especially doing cataracts and glaucoma surgery. Unfortunately, Phil Thygeson had never come back to the institute from the war, but they had an excellent research man up there to fill Dr. Thygeson's shoes, and that was George Smelser. George was a PhD and he was an excellent organizer and an extraordinarily able researcher. He published a lot of papers and he also supervised a lot of the other research that was going on.

Carl Meyer was still there. Carl had done some exceptionally good work on hyaluronic acid in the constitution of the vitreous. He was recognized internationally for this contribution. Then there was a chap that came in there named [Zacharias] Diche. He was doing very good work over on the research side. And then back on the clinical side, Gordon Bruce was doing great work;

and we had Frank Carroll up there in neuro-ophthalmology. He had done an exceptional job in proving that alcohol neuritis was not due to toxicity of the alcohol but was a dietary problem due to a thiamine deficiency.

Hughes: How is that manifested in the eye?

Guerry: It was exactly the same pathology that they had in prison camps during the war—a nutritional thing. That turned out to be the same thing as alcohol neuritis, except the pathology in the prison camp was much more severe because those people weren't getting *any* thiamine. Although the alcoholics' imbibition of alcohol supplied most of their calories and not much of their vitamins, they still got enough thiamine so that most of them didn't actually go blind, and in most instances it was reversible. But in these prison camp cases, loss of vision was severe and irreversible.

Frank would check his alcoholics and let them have their pint or quart a day. He'd test them and give them thiamine, and they didn't get any amblyopia. He showed conclusively that lack of thiamine was the cause of it. That made a big stir in the neurological and neuro-ophthalmic community. So the eye institute had a real good show going on there at that time.

Tonography

Hughes: I understand from talking with Dr. [Harold G.] Scheie that tonography was considered very important in glaucoma work for a while, and then the emphasis on it decreased. Is that a fair assessment?*

Guerry: I think that's a fair assessment, there's no question about it. Everybody thought that tonography was just the grandest thing that had ever happened to glaucoma and that it was going to answer all of our questions. It just didn't turn out that way, either diagnostically or therapeutically. To my knowledge, it's not being done at all now. It was thought that with tonography you could establish a norm as the recording was going on. You could have the patient drink a certain amount of water in a hurry—as I remember, it was about a pint—and then see how the eye handled this extra fluid. They thought the curves that came out were diagnostic of how the angle was working and whether it was filtering properly. It would give you some idea, particularly in those cases where there was some question, whether the patient really had glaucoma or not. There was a lot of attention paid to

* See Dr. Scheie's oral history in this series, pp. 247–249.

tonography for maybe ten or fifteen years, and then it just sort of died out and you don't hear about it any more.

Hughes: Because it wasn't very discriminatory?

Guerry: I think that's it exactly, and we had so many better ways of diagnosing glaucoma.

*Hughes: Dr. Scheie maintained that at one stage it was very difficult to get a paper on glaucoma published if you didn't have the tonographic figures.**

Guerry: Well, he's right. You had to have them even if you didn't want them.

Ophthalmological Aspects of Crash Injuries, 1956

*Hughes: The next thing on my list is the paper you wrote on ophthalmological aspects of crash injuries, which was published by the American Medical Association in 1956.** It was part of a symposium, I gather. Was that something that the AMA had pulled together?*

Guerry: Yes, it had to do not simply with ophthalmic crash injuries but other types as well. I got interested in crash injuries at that time because I had an automobile that had one of those wraparound windshields. It would drive me nuts because I used to like to drive with my elbow stuck halfway out the window, and when I moved over that far I was looking through the curve in the wraparound windshield and I got a terrific amount of distortion from it. This was extremely annoying. I'd have to move back to the normal driving position to get rid of this distortion. I thought that this might be causing a lot of problems, and so I presented this paper and it hit the headlines.

The automobile manufacturers were all incensed because they'd done all this car research and had come up with this idea of the wraparound, really not from an optical standpoint. They didn't even consider that; it just was the way the car ought to look to have this svelte appearance. I told them I thought this could be responsible for some accidents, and I thought that they ought to do something about it.

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* Scheie oral history, p. 248.

** Guerry D. Ophthalmological aspects of crash injuries: driver licensing and repeat offenders. *Symposium on Crash Injuries.* American Medical Association, Chicago, June 1956.

I had just about got back home when the vice-president of Corning Glass came down to see me. Strangely enough, he was a Mr. Beverly Tucker, the brother of Bishop Henry St. George Tucker, who was the presiding bishop of the Episcopal church. That's neither here nor there, but most of those Tuckers are kin one way or the other, and we have, as you know, a Tucker in our family now,* and Mr. Tucker was his great-uncle.

Tucker said, "What is all this that you've stirred up here? We thought we had a good thing." I said, "Well, look, you just go and drive your own car and you'll find that vision through the windshield is just not as it should be." He said, "I think you've got a real good point. The problem is, What can we do about it right now? It'll be about three years before we can get rid of this type of car." I said, "I think you ought to get rid of these windshields as quickly as possible." He said, "We have our team working on it now. You'll find that as fast as we can, we're going to get it done."

I was asked to testify in several injury cases, but I refused. I thought the instances in which the wraparound windshield problem had caused the accident were few and far between. I don't know whether it was a primary cause, but I think it probably had a lot to do with increasing driving fatigue, which could lead to accidents. But I never went into court and said that, and I never wrote any letters to that effect. The automobile manufacturers really cleaned up their act, just as they said they were going to, and as soon as they could, they did away with the windshields.

Hughes: So your testimony made a difference.

Guerry: It really did. The Italians published my article in a journal and gloated over the fact that they had never gone in for wraparounds and they were real happy to have this information. They felt that their engineering was ahead of ours since they had not gone overboard on this way-out styling.

* Henry St. George Tucker, the husband of Dr. Guerry's daughter Mary.

Photocoagulation

Research With William T. Ham, Jr.

Hughes: The next paper to discuss is on flash burns in the rabbit retina, which was published in 1956. Could you give me a little background about previous research that had been done on flash burns in the retina? I know, for example, that there was some post-Hiroshima work.***

Guerry: That is really what brought flash burns to the fore. My collaborator, Dr. Ham, was at the White Sands Proving Ground in the days when they had the first atomic explosion. They found that the rabbit eyes exposed to these atomic flashes had definite chorioretinal burns.

Victor Byrnes, an ophthalmologist and a general in the army at that time, as well as David Cogan and his Harvard group, wrote some papers describing the retinal damage.

The war ended after atomic bombs were dropped on Hiroshima and Nagasaki. That ended the war with a big bang. There's no question about it, if the bombs hadn't been used the war would have gone on and on. I think they truly made the right decision because it stopped the war in its tracks. We would have lost hundreds of thousands of our boys, if not a million or so, in an invasion of Japan.

Hughes: What was the breakdown of labor when you were doing the flash-burn studies with Dr. Ham?

Guerry: Dr. Ham, one of the most advanced physicists in light in this country if not the world, is really a pioneer, and so many of the things that he studied and has written about are original with him. The most recent one is his discovery of the toxicity of the near-blue end of the spectrum and its relationship to possible macular problems.*** This has certainly opened our eyes to the deleterious effect of this part of the spectrum on the aging of the

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* Guerry D, Wiesinger H, Ham WT. Experimental production of flash burns in the rabbit retina. *Trans Am Ophthalmol Soc* 1956; 54:259–273.

** See *David Glendenning Cogan, MD: The Howe Laboratory of Ophthalmology at Harvard Medical School, The Massachusetts Eye and Ear Infirmary, and The National Eye Institute.* Ophthalmology Oral History Series, A Link With Our Past. Interviews conducted by Sally Smith Hughes, PhD. The Foundation of the American Academy of Ophthalmology, San Francisco, and The Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1990, pp. 83–90.

*** Tapes of the interviewer's conversation with Dr. Ham, recorded at his home in Richmond on April 9, 1990, include a discussion of this and other aspects of his research. The tapes are on deposit at the Foundation of the American Academy of Ophthalmology.

macula, and in genetically susceptible people it may cause macular degeneration. Certainly, he has brought to our attention the fact that this particular part of the spectrum is one that we should avoid at all costs, and it behooves all of us to protect our maculas by wearing glasses that filter out this particular spectral area.

Hughes: I understand from talking with him yesterday that, in contrast to the work that you'd been doing on burns, this is not a thermal effect.

Guerry: It's photochemical because there's no rise in temperature at all, and yet these changes take place. So it's bound to be a chemical effect. The light induces this reaction.

Hughes: Was the carbon arc with the ellipsoidal mirrors developed by Dr. Ham?

Guerry: Yes, that was his brainchild. That was the best light source that we had available at that time. Way back yonder, Freddy Verhoeff in 1916 had used a carbon arc to study retinal burns, and he published an article describing these studies.* That was the first one that I knew of in the literature that had anything to do with any kind of retinal burn. When we read a paper at the AOS one year, Verhoeff got up and wanted to know why we hadn't cited his reference. The reason we hadn't was that we were talking about atomic bombs, and we told him that his work didn't have anything to do with atomic bombs, as they were not artificial illuminators, nor were they extant at that time.

Hughes: As I remember, he took exception. He still thought you should have given him credit. [laughter]

Guerry: That's exactly right.

Hughes: Typical Verhoeff.

Guerry: Yes, really. He was an extraordinary man. I'll tell you, he was one of the great ophthalmopathologists and one of the greatest physiologists, too. He did a tremendous amount of research. He was one of the really great ophthalmic contributors.

Hughes: You mentioned earlier that Al Reese was a great pathologist. How did those two pathologists get along?

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* Verhoeff FH, Bell L, Walker CB. The pathological effects of radiant energy on the eye. *Proc Am Acad Arts Sci* 1916; 51:630.

Guerry: Strangely enough, they admired each other and got along just fine. I don't think either one of them ever made an unkind remark about the other. Every once in a while, they'd have a disagreement about a particular diagnosis, but they did it with a feeling of camaraderie and not one of antagonism. They thought a lot of each other.

Clinical Applications

Hughes: I gather, again from talking with Dr. Ham yesterday, that the carbon arc apparatus must have been rather complicated to operate. He mentioned that in the first case that you treated, there were eight people operating the machine. [laughter]

Guerry: It was hard to tell who was doing what with which and to whom a lot of the time. It was a Rube Goldberg apparatus. No, you really had to have the patience, as well as patients. It didn't make any difference with the rabbits because all we were interested in was targeting the instrument on a rabbit retina and putting the lesions wherever they fell. Then we'd make marks on the diagram, showing what part of the retina we had actually hit. But we weren't interested in targeting a particular area until we got to our human case. We didn't have any way of targeting with our machine, so that's why we were looking for a macular lesion to treat—so the patient could look at the target and then we would just shoot where he looked.

Hughes: Am I right in thinking that clinical application came later, that when you first started that flash-burn work, you were looking for the lowest level of radiation that would affect the eye?

Guerry: Exactly right.

Hughes: When did you begin to think that the machine could be used as a photocoagulator?

Guerry: Well, the truth of the matter is that we thought from the very beginning that it had that application, but we had not gotten far enough with our thinking to figure out how we were going to do that.

Hughes: As you well know, Dr. Cogan was, during the same period, working on radiation-induced cataracts. Was there any call to be in touch with him?

Guerry: No, not then, but later on, when Dr. Geeraets came into our laboratory, he was very much interested in doing radiation

cataract studies. As a matter of fact, we were interested in seeing what normal rabbit lenses looked like and then seeing what happened when you irradiated them and also in studying the lenses pathologically.

When Geeraets had been in our research effort for a year or so, he and Dr. Ham and I were interested in the effect of radiation on the lens of the rabbit eye. I remember one of the most important things we had to do before we carried out this research was to study the rabbit lenses and see how many congenital and developmental changes there were before we did any irradiating. For each animal in the study, we would document very, very carefully before irradiating where there were opacities, because if you didn't do that, you would attribute any changes that took place to irradiation when they might very well have already been there. As a consequence, we spent a long, long time studying rabbit lenses ahead of time and documenting preexisting changes prior to treatment. This research also had to do with aging anomalies as well as radiation effects.*

Hughes: How was the level of radiation being measured?

Guerry: The people who work in radiation have ways of calibrating it and deciding exactly how they deliver it.

Hughes: Dr. Ham told me that he developed an apparatus that could give an extremely short burst of radiation—

Guerry: That's right.

Hughes: —and that no other setup in the country or probably anywhere could deliver radiation in such short bursts.

Guerry: This is a physicist's problem, and that was one of Ham's babies. This is his real forte.

Gerd Meyer-Schwickerath's Sunlight Photocoagulator

Guerry: As a direct result of this, the armed forces were very much interested, particularly the air force and the so-called Atomic Energy Commission, in finding out exactly what the deleterious aspects of the bomb were. Bill Ham had begun to do some work in his laboratory [at the Medical College of Virginia]. I was interested in the subject because I had gone to a symposium in

* Geeraets WJ, Harrell W, Guerry D, et al. Aging, anomalies, and radiation effect on the rabbit lens. *Acta Ophthalmol* 1965; 43:3–21.

New York at the International Congress of Ophthalmology that year, and Gerd Meyer-Schwickerath had reported on some retinal burns that he had made in treating some human beings with retinal problems with his machine which utilized sunlight as a light source. This machine had a clocklike mechanism that would follow the track of the sun so it kept it in focus while he was using it. He had a problem though; if it was a cloudy day he couldn't use it. Or if a cloud came up while he was using it, he had a problem. He had begun to do his basic research using another light source, and it wasn't too long after that, working with the Zeiss people, he developed his xenon arc coagulator.

Hughes: What was the reaction of ophthalmologists at the International Congress to the work on photocoagulation?

Guerry: Everybody thought it was an interesting hypothesis, but it was given short shrift; nobody got excited about it. I was the only one who got excited, and the only reason I got excited was because I knew about this other research that we had going on at home. So I got back and talked to Ham. I said, "We were talking the other day about the research that we are doing and its possible clinical applications. It certainly seems to have clinical applications, and here's Meyer-Schwickerath doing it with sunlight, so I think that we ought to get on the wagon."

Meyer-Schwickerath and his cohorts had not done any real basic research in determining the least amount of energy that would damage the retina. That's what we were interested in for both the air force and the Atomic Energy Commission. It was very important to them to determine what that energy component was, what it took to produce retinal burns so that we could develop methods of preventing this.

Hughes: In atomic explosions?

Guerry: In atomic explosions, exactly.

So Meyer-Schwickerath and I corresponded, and he was very much interested in having our data. Of course, we had to have Q clearance because much of this research concerned classified information connected with this atomic business. The first research that we did was absolutely hush-hush.

We finally got permission from the Atomic Energy Commission and the air force, who had been funding the research that we were doing, to let Meyer-Schwickerath use our data. We then shipped the basic data that we had completed in our research effort, and they used a lot of that data in refining the

[photocoagulation] instruments that they were developing. As a matter of fact, Dr. Ham and Wolfgang Lieb and a couple of other boys from the Department of Biophysics and from our department went over to Germany and spent some time with the Zeiss people, looking at the new instruments that they were developing and discussing our basic data with them.

Dr. Guerry's Xenon Photocoagulator

Guerry: It was just at this time that Zeiss had marketed its xenon coagulator over there. As a result of our working with them and their using our basic data and the fact that our team went over there and worked, they allowed us to have the first Zeiss light coagulator in this country. We were interested in how we were going to pay for it, when providentially the Knights Templar gave us a grant of $20,000, which took care of it. Some several months after we got our instrument in the fall of 1956, the Zeiss people shipped one to Graham Clark in New York and one to Dohrm Pischel in San Francisco.* It wasn't long after that that everybody had one.

Hughes: But you got the first one.

Guerry: We got the first one. As a matter of fact, it was several months before the others were shipped. This was a courtesy to us since we had been working with them and had really been in the forefront of experimentation in this particular field.

Hughes: When the group from MCV went to Germany, did they work with Hans Littmann, who was the Zeiss person, on modifying the instrument in light of your data?

Guerry: Yes, they did, in regard to several aspects. There were some modifications made in the aperture sizes and in some of the lenses because of our data. They utilized our data and found it very helpful.

Hughes: Was your data different than that of Dr. Meyer-Schwickerath mainly because you had been working so closely with biophysicists?

Guerry: Absolutely. As a matter of fact, Meyer-Schwickerath's group really was more interested in what photocoagulation did

* See *Dohrmann Kaspar Pischel, MD: American Links With Germanic Ophthalmology, Retinal Detachment Surgery, San Francisco.* Ophthalmology Oral History Series, A Link With Our Past. Interviews conducted by Sally Smith Hughes, PhD, The Foundation of the American Academy of Ophthalmology, San Francisco, and The Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1988, pp. 78-81.

pathologically to the eye and not in the least amount of energy that would cause the burning. We approached it from a different perspective. They were interested in causing a therapeutic burn, a burn that you could use to treat with, and they didn't really give a hoot about what the least amount was. What our government wanted from us was to know what's the least amount of energy that causes a burn, so that we could protect the retina.

Hughes: What had attracted Meyer-Schwickerath to this field?

Guerry: Meyer-Schwickerath was a retinal man in the first place. He said that one day as he was walking down a snowy street, he realized that the snow was melting where light could go through the snow and warm up a dark road, and where there was no dark background it remained unmelted. This reminded him of the retina and he wondered if he couldn't shine light which was sufficiently powerful as to burn the retina and thus close a retinal tear.

The way he expressed it was that if you can treat detached retina as we do now with electric pins and needles from the outside, why can't we do the same thing from the inside, because look what the light does when it goes through the snow. It melts in the area where you've got pigment, but not in the other areas. You can send light through the pupil and the pigment epithelium will absorb it and not the retina per se. And if sufficient light is focused on a retinal tear, the pigment epithelium will absorb it and a burn will result. Then he said, "What light source will I use? The easiest thing is the sun. I'll try it."

So then he developed his sunlight machine, the one with the clockwork, with the help of the Zeiss people. He tried it on a patient and burned a retinal hole. He found it worked fine. Then they tried to decide which would be the best light source, and they came up with the xenon arc because that was the particular source that was more adaptable and better for this purpose.

Treating the First Patient With the Carbon Arc Photocoagulator

Hughes: You had been using the carbon arc.

Guerry: We had been using a carbon arc as our light source, and, like I said, our apparatus was the doggonest Rube Goldberg contraption you ever saw. We used one of these tremendous army searchlights with the carbon arc in it as our source, and then we had a parabolic mirror that reflected the light through a little computer shutter diaphragm so that we could control the

exposure times. This is the instrument we did all our original burns with. We burned the first human case in this country after we'd been doing our rabbit work, I guess, for about a year.

As I've already said, Bill Ham and I recognized very early in our experiments that light coagulation had clinical overtones. We recognized the fact that if we could find a case with a central lesion so that the patient could look at the carbon arc, we could burn it with our apparatus. We couldn't manipulate the machine as if it were an ophthalmoscope as Meyer-Schwickerath could with his sunlight coagulator or later his xenon coagulator.

A Mexican chap who was a real bright researcher with one of the chemical companies around Richmond came in one day with blurred vision in his right eye. I looked at his retina, and, sure enough, he had a small hemangioma right in the macula. This was just exactly what we'd been looking for. I told him what he had and I said, "You're going to lose your central vision if it's not treated." He said, "How do you treat it?" I said, "The way that it's been treated in the past is that you'd take a diathermy needle and stick it way around behind the eye and burn that area by sticking the needle into the tumor until it's clear. Now, that's the way it's been done, and if you do that, you're going to lose all your central vision, there's no question about it. We've got this apparatus in our research lab, and we've never burned anything but rabbits, but we think we can do that same sort of thing on your eye and we think that we can do it in such a fashion that your visual loss will be less than it will by treating it the other way. But I don't want to talk you into anything; you think about it, and if you want to be a guinea pig for us, we would love to work with you on it." He said, "I don't have to think about it. That's the way I want to go right now." I said, "Well, we'll set it up and go down there and do it."

So I called Bill Ham with great jubilation. I said, "We've got the very case we've been looking for. When can we do it?" He said, "Let's do it right now." So we went down to the lab and cranked up the carbon arc apparatus and put the fellow in the stocks, as it were, and got the apparatus lined up. We had a little target for him to look at, and we said, "Now, you just look at the light and fix on it." We knew from burning the rabbits what it would take to get a good burn on this hemangioma by computing the difference between the length of the rabbit eye and the human eye. So we blasted away, and we made three exposures. Two of them hit the tumor squarely and one of them hit one of the feeder vessels just next to the tumor. The lesions were just what the doctor ordered. That's all we did that first time.

We got the patient back in three days, and the tumor, which was immediately white, was beginning to pigment a little teeny bit. We hadn't gotten all of it so we put another two or three burns in there. Within a period of the next three months, the tumor disappeared completely and we had good, healthy scar tissue. The macula was not completely destroyed; some of it remained so that he had about 20/70 vision. As recently as, I guess, twenty years afterwards, he still had about 20/50, 20/60 vision. If we'd done it with superficial diathermy, he would have lost all central vision. We were naturally exuberant.

I presented it at the state eye, ear, nose and throat society,* and nobody in the audience would believe that this had happened. Everybody was real excited about it. We published it immediately,** and that was the first [human] case of light coagulation in the United States.

Hughes: Meyer-Schwickerath had already begun treating patients?

Guerry: Yes. Meyer-Schwickerath had actually been treating them with his new machine, which wasn't the export variety of the Zeiss coagulator, but it was probably the second generation.

Hughes: People were enthusiastic now?

Guerry: Oh, it opened up a whole new vista. From then on, it was the xenon arc.

The Zeiss Photocoagulator

Hughes: I heard a rumor that one of the early photocoagulators exploded.

Guerry: I don't really know where that rumor came from, because I honestly don't know of anything that happened like that. Since we were so close to it, I think that I or Ham would have known. Did they mean that with one of the machines somebody had blown up an eye?

Hughes: I really don't know.

Guerry: I think some exuberant individual with the red range of the xenon light coagulator could very well have made some awful loud noises in the back of the eye.

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* Guerry D, Wiesinger H. Photocoagulation of the retina. Virginia State Ophthalmological Society, December 1957.

** Guerry D, Wiesinger H. Light coagulation of the retina: report of a successfully treated case of angiomatosis retinae. *Am J Ophthalmol* 1958; 46:463-466.

*Hughes: Dr. Norton said that you can actually hear a pop.**

Guerry: Yes, you can. Absolutely. Sounds just like popcorn.

Hughes: How readily available was the Zeiss photocoagulator in the early days?

Guerry: Within about three years of the time that we got ours in 1956, I think every institution worth its salt had one.

Hughes: Could Zeiss keep up with the orders?

Guerry: Zeiss was pretty well ready to market them. They had a fair number of them on the continent before we got any in the States, so they were geared up to turn them out almost on a wholesale business.

Hughes: What was Hans Littmann's role in the development of the machine?

Guerry: Hans Littmann was the physicist that worked with Meyer-Schwickerath, and Meyer-Schwickerath was the clinician. Littmann was the guy that decided which spectrum was to be used and what type of light source was needed. Then Meyer-Schwickerath told the Zeiss people what was needed from a clinical standpoint. They got together as a team, and the Zeiss people, with Littmann running the show, did all this. He was a delightful fellow, too—real unassuming, quiet, very, very bright.

I think Sally [Guerry] told you about the time that we had Sabri Kamel, who was the professor in Cairo at the Giza [Memorial Ophthalmic] Institute, visiting with us at the same time that Hans Littmann was here. We took them to the Tobacco Bowl football game with the University of Virginia versus Virginia Polytechnic Institute playing. We were all sitting down there in the front row, and every time that the Cavaliers would score, we would all shout, "Go, Wahoos, go!" We had one of them saying, "Go, Wahoos, go!" in Egyptian, and the other "Go, Wahoos, go!" in German. [laughter] And we won. They had a ball.

Hughes: What was the most exciting thing about photocoagulation?

Guerry: I think the most exciting thing was the ease and the ability to zero in exactly on what you wanted to treat; and it was so easy to control. Last but not least was the fact that patients were

* Interview with Dr. Edward W.D. Norton, New Orleans, November 2, 1989.

ambulatory and simply walked away in most cases without any immobilization and without losing time from work or play.

Hughes: It was easy on the patient.

Guerry: Oh, absolutely. A patient who had undergone surgery and then the light coagulator just couldn't believe it. You'd find sometimes postoperatively that you hadn't done what you needed to do. Instead of having to take them back to surgery, you sat them down and zapped them with a few applications of the photocoagulator, and that was it. It was just the difference between night and day.

Hughes: There was no pain involved?

Guerry: So little that the patients didn't complain. Sometimes when we use the light coagulator for some anterior segment procedure, as with the glaucomas, they may have some discomfort and may need a retrobulbar injection [of anesthetic]. There's very little to the retrobulbar injection, and patients don't mind it because they're used to having their gums anesthetized by the dentist, and you just tell them it's the same thing.

Hughes: Dr. Norton told me that there was initial reluctance to use photocoagulation in diabetics because of the fear of causing extensive bleeding. Do you remember that?

Guerry: Was he talking about any diabetic or a diabetic with retinal detachment?

Hughes: I thought he was talking about the vascular problems that many diabetics get.

Guerry: I think all of us had some trepidation about treating diabetes with the light coagulator, but it soon became apparent that the pan ablative procedure had a very salutary effect on diabetic retinopathy. The government-sponsored research project proved its efficacy and resulted in guidelines for therapy. As a matter of fact, I imagine that eighty percent of the light coagulators that are used today are used in treating diabetes.

Speaking of Ed Norton, he was one of the great pioneers in treating diabetic retinopathy. He had a great deal to do with developing the pan ablative procedure to prevent proliferative diabetic retinopathy and also in developing vitrectomy for this phase of the disease. He and Bob Machemer, now professor at Duke, were largely responsible for this modality, which has resulted in saving countless eyes.

Hughes: You don't remember any hesitance to use light coagulators in diabetics?

Guerry: We always knew that when you treated them, you wanted to be very careful and not zap a big vessel so that you got a lot of bleeding, because if you did, that would obscure everything and make further treatment impossible.

Hughes: I read that Meyer-Schwickerath used, at least at one stage, a two-step procedure, the first being the apposition of the choroid and the retina, and only later did he come in with a photocoagulator.

Guerry: Yes, that's right. He would go in and drain fluid and then go back and treat with the light coagulator.

Hughes: Days later?

Guerry: As soon as the retina flattened out. He'd go in and drain and then put the patient in a supine position for twenty-four hours until the retina flattened out. If it flattened out, he'd light coagulate the patient and do nothing else. If he got good takes and could seal the retina off, the patient got well. If he didn't, then he'd have to go ahead and do surgery.

Hughes: Did you ever use that technique?

Guerry: No. I thought it was a lot of wasted motion.

Hughes: Was insurance coverage ever a problem in the early days of photocoagulation?

Guerry: We didn't have any problems at all, because as soon as we established it as a valuable modality, the insurance companies were just delighted because we were saving them money. They'd pay a third or a fourth of what they'd have to pay if the patient had to have surgery.

The only place that they got a little bit uppity had to do with treating diabetics. Some people were trying to charge by the number of [photocoagulating] applications used. Of course, when pan ablating a retina, you use a tremendous number of applications, and the insurance companies didn't take very kindly to that. They thought you ought to pay by the case and not by the number of shots, which everybody finally agreed on. But that's the only misunderstanding I think people had with the insurance companies.

Meyer-Schwickerath's Eye Injury

Hughes: Please tell me the story about Dr. Meyer-Schwickerath's injury to his own good eye.

Guerry: That's an unbelievable story. Meyer-Schwickerath told me about it one time when he was visiting us. He said, "You know, DuPont, in developing this photocoagulator I had a very sad train of events that frightened me to death. We were far enough along with the prototypes of our Zeiss coagulator, but we had not built into it any safeguards. The machine would start up and it was a little bit cranky at times, and we hadn't really refined it. One day, I was burning some animals with this, and all of a sudden the machine cut off. I wiggled the switches and messed around with it and it didn't come back on. For some strange reason, I decided I would look down the barrel of the machine where the light was delivered. You must remember now that I have only one good eye. As I did, the machine suddenly started up and burned my retina. I realized immediately what had happened because my sight was very blurred. I actually did get a retinal burn, but luckily it was parafoveal.

"I was out of commission for a period of a month or so, and during that interval my vision, which had gone down to less than 20/200, was very bad. I had no problem getting around because my peripheral sight, wasn't affected. That being my only good eye, the powers that be and I myself were getting to worry about what my future would be. It was perfectly obvious that if I didn't have one good eye I could not be a light coagulator. I just dreaded the thought of what might happen, but luckily my vision began to improve, and inside of a month and a half, it cleared up and went back to 20/20." He did have a parafoveal scar in his good eye, but the small residual parafoveal scotoma was of no great consequence.

Hughes: When you received your machine, your Zeiss xenon arc, were there safety devices built into it?

Guerry: There were all kinds of safety devices. You can just bet that after that, they put every imaginable thing in there to prevent anything like that happening. It was about as foolproof as a machine could be made.

Hughes: There were not accidents with them?

Guerry: No accidents of that sort. The only accidents from any of these light coagulators came about inadvertently as accidents always

do. The laser is a coherent beam and if it hits a mirror or any shiny surface, it can bounce off, and if you happen to be in the way of the beam, you can burn your macula. So that's why a series of rules and regulations that controlled how lasers may be used was developed. The photocoagulator wasn't as dangerous. You almost had to look directly into the Zeiss machine before there was a danger, since the beam was not coherent.

The Laser

Hughes: The next step was the introduction of the laser.

Guerry: My old friend Charlie Townes had discovered the laser principle and gotten the Nobel Prize for it. He didn't discover the laser, but he discovered the maser, which was the principle, and then the laser was discovered by T. H. Maiman. We realized that as a light source the laser was probably going to be infinitely superior to the xenon arc and that eventually it would supersede the xenon coagulator.

Hughes: Can you explain why?

Guerry: In the first place, with the laser you can get any light wavelength you want, and if you have a particular type of tissue that you want to burn, you use one kind of wavelength, and if you want another tissue to react another way, you suit your light wave to it. In other words, some of the light will be absorbed. You can pick a light wave that will not cause too much problem with hemoglobin, and you have another one that won't cause too much problem with the pigment in the choroid. So you can suit it to all kinds of situations—layers of the retina, for instance.

Hughes: Surely, it must have taken years to accumulate information on what exactly the effect of the laser was on different tissues.

Guerry: That's exactly right. That's why everybody realized almost from the beginning, when lasers became available, that this was a much better way of going. It also was a lot simpler to handle than the big xenon arc-type bulb and apparatus.

For a long time, people thought that the xenon arc was better for certain purposes, particularly if you wanted to get heavier burns than with the laser. The truth of the matter is that if you used the laser, you could get most any kind of burn you wanted. But at first there was a difference, and I think we probably did better work with the xenon arc for a short while until the different kind of lasers were developed.

Hughes: So when the laser came along, you didn't immediately drop the xenon arc?

Guerry: No. As a matter of fact, some people still use xenons today, but there are very few of them.

Hughes: Do you consider yourself a pioneer in the use of the laser as well as the xenon arc?

Guerry: A grateful patient gave us funds for purchasing one of the first ruby lasers, so we got in on the ground floor with that as well. But our real pioneering had to do with getting the basic data, plus burning the first case, plus using the xenon arc. Then after that, everyone was in on the act—all the retinal people. And all the manufacturers were getting into it: "My laser's better than your laser." It got to be a promotional thing as to who was going to develop the best laser, and the laser that would do the most things, and the one that would do specific jobs.

Hughes: How useful was the laser in repairing retinal tears?

Guerry: It did exactly the same thing as the xenon. At first with the lasers available we weren't able to get quite as heavy a burn. As the other lasers were developed we learned that we could do just as well with the laser and maybe even better, with less destruction of tissue, than with the xenon arc.

Laser Hazard Standards

*Hughes: Dr. Ham stated that both the departments of ophthalmology and biophysics were participating in the establishment of national laser hazard standards.**

Guerry: Absolutely.

Hughes: Was that specifically for eye work, or laser hazards in general?

Guerry: It had to do with protection from laser hazards of everybody who had to work in a laser surround. For instance, if you were working in a factory and there was laser work being done, there were certain things that the government felt the factory had to do. The laser beam can bounce off a mirror or a mirrorlike surface, and if somebody is on the other side of the room and it happens to go in their eye, you might hit them in the macula, and then out it would go. You'd be surprised at the number of injuries

* Ham WT Jr. *Biophysics at the Medical College of Virginia, 1948-1968*. Richmond: Medical College of Virginia [Photocopied booklet, nd], p. 16.

before they began to develop a protocol and rules for the use of lasers. When people who worked in a laser environment were examined by their doctor, the doctor would find out they had all kinds of little reactions from the lasers, little scars in the periphery. They just lucked out by not getting hit in the macula, because the laser beam wasn't a direct shot but rather a glancing blow; that's why they got scars in the periphery.

There were a good number of those cases that showed up in the literature. In this litigious society now, if you had an environment where people were working and showed up with a whole bunch of scars on the retina that they never had before, you'd be sued. So we were taking precautions from the standpoint of protecting the patient, but we also were protecting the institutions from getting sued. So it worked for the benefit of everybody to have these rules.

Hughes: Who enforced those rules?

Guerry: The federal government.

Hughes: Would the rules be written into a grant award?

Guerry: Oh, absolutely. The government wouldn't give you any money if you were going to be lackadaisical with your laser and just use it willy-nilly without protecting the environment as well as people.

Hughes: Dr. Ham also mentioned that the departments of biophysics and ophthalmology were on two occasions invited to present research findings on light coagulation to the Virginia state legislature. Were you involved?*

Guerry: Well, I was behind the scenes. I never did a presentation down there.

Hughes: Were the presentations concerned with the safety issue?

Guerry: Yes.

Fostering Research at the Medical College of Virginia

Hughes: Wasn't it unusual in the early fifties to have a close collaboration between a clinical group, namely, the Department of Ophthalmology, and the biophysicists who were working on a more basic science level?

* Ibid, p. 18.

Guerry: I think our situation at the Medical College was really unique. There were some laboratories and some clinicians doing this kind of work, but at the time that Ham and I started our efforts, I think we were the only group that was doing this sort of thing. It was really ideal.

Hughes: You mean any group anywhere in this country?

Guerry: In this country, yes. I can't think of anybody [in ophthalmology] that had this arrangement.

Hughes: One of the AMA's criticisms was that there simply was not enough research being done at the Medical College.

Guerry: That's true. That was one of the weaknesses of the Medical College. This was one of the things that was rectified after John Truslow became the dean and saw to it that the various disciplines worked together. It was under his aegis that the Department of Biophysics really got the big impetus to do the things that it did. It was a natural, though, when you really look at it. There are some institutions that have physicists in the department, but it's pretty unusual to have a Department of Physics and a Department of Ophthalmology where the two are putting their all into it.

Hughes: You had a busy private practice and from 1953 and twenty years thereafter, you were also chairman of the department and very busy building it up. Why did you bother with research?

Guerry: I've always had an inquisitive mind, and I have always been interested, ever since I can remember, in research. From the time I was a resident at the University of Virginia, research was part of my life. I felt that really to be a complete ophthalmologist, as in the *Compleat Angler*, you really had to teach, have clinical experience, and do research—the so-called three-legged stool.

Hughes: Were you ever criticized by your colleagues for spending time on research?

Guerry: Most of them weren't interested in it. They thought it was time wasted. But I think I enjoyed research every bit as much as clinical work. It does something to you to find that you've really done or seen something that nobody else has done or seen before. It's a satisfying feeling.

Hughes: Did you ever feel held back because, at least in the early days, you were in an institution that wasn't particularly research-oriented?

Guerry: Yes. I think the first few years that I was associated with the Medical College, I felt a great sense of frustration because nobody was interested in research. They didn't actually tell you you couldn't do it, but they certainly didn't encourage you to do it.

Hughes: How much of the movement towards research was driven by developments at the national level? Distributors of research grants were more and more insisting that the medical institutions have a good basic research component.

Guerry: That had a lot to do with it. One of the reasons that the Medical College wasn't any more interested in research than it was, was that their funds were so limited that they had to spend practically all of them on running the institution, with nothing left over for research. All the big institutions, such as Harvard, Yale, and Columbia, had funds for research. The Medical College didn't, and it was having a tough enough time as it was making a go of it. And then Truslow came in as dean, and at the same time the federal government made grants available. That was the impetus that we needed to get research going at MCV.

Another interesting fellow that came along about that time was my old neighbor Everett Evans; he worked in the Department of Surgery. That was before Hume got there and while [Isaac A.] Bigger was head of the Department of Surgery. Evans was doing research on skin burns for the government. He had an international reputation.

Hughes: Evans must have been a farsighted man.

Guerry: He was a really extraordinary individual. He was a good surgeon in his own right, but he was a basic researcher too, and he knew how to attract talent. That's how he got Ham down here. Ham wouldn't have come down here if there'd been a complete dearth of research. When Ham came down here, he realized that it was a very fertile field with a fellow like Everett Evans pushing things.

Hughes: Was Dr. Ham supported largely by grants from the Atomic Energy Commission and various military organizations?

Guerry: To begin with, and then everybody realized that there was extraordinary work going on down here, and he began to get grants from corporations such as the Corning Glass people. AT&T [American Telephone and Telegraph] gave large sums for research. I can't say this for sure, but I believe that the grants

that we got from commercial companies outweighed the federal. But it was nip-and-tuck, you see. Funds came from both sources.

Hughes: Was AT&T supporting any particular type of research?

Guerry: AT&T was interested in anything having to do with light. Our unified program between the Department of Ophthalmology and the Department of Biophysics is what brought AT&T in. I think if it had been just biophysics or just ophthalmology, we wouldn't have gotten the money from either the government or the corporations.

Wolfgang A. Lieb

Hughes: Tell me, Dr. Guerry, about Dr. Lieb's background and also how he came to the Medical College.

Guerry: As I mentioned previously, Herb Wiesinger and I were looking for somebody to run the laboratory down at the Medical College. Dr. von Sallmann had by that time become head of the government research program in Bethesda [director of intramural research, National Institute of Neurological Diseases and Blindness], and he was one of my heroes as far as research goes. I called him up and told him that I was looking for somebody to head our research effort at the Medical College, and I would very much appreciate any help he could give me in identifying such a person. He said, "I'm glad you called. I have the very man for you, and I think he might be interested. "He's a young fellow named Wolfgang Lieb, from Germany. He's from a fine family, he's had a beautiful ophthalmic education, and he's a real fine person. He is presently working over at the Wilmer Institute. I can put him in touch with you if you would like to have me do that." I said, "Gee, I'd love for you to do that."

So von Sallmann called me in a couple of days and said, "I talked to Dr. Lieb, and he said he would very much like to come down and talk to you about the job because he's learned about all that he needs to learn at [Johns] Hopkins [University], and he doesn't want to go back home yet. I'll have him call you." So in twenty-four hours, Lieb called me and said he would be very much interested and he'd like to come down and look the place over, which he did.

We were very much impressed with him. He was bright, and we could chat with him about various ophthalmic problems; he was right on top of them. He seemed to be very earnest about pursuing a career where he would do some research before going back home. But he ultimately wanted to go back to Germany. I

said, "That's ideal because we need somebody certainly for the next four or five years, and then after that we may need you and we may not, so that would be fine." I said, "How soon will you be available?" He said, "Within a matter of weeks."

So Wolfgang went back and talked to the powers that be at Hopkins and they said sure, that would be fine because they really didn't have a position that he could rise to. He was getting tired of what he was doing, so he came on down and set up shop. He was an extraordinarily able researcher. He was intelligent, he was intuitive, he was hard-working, and he had a wonderful command of the English language. Not only that, German was his native tongue and he was conversant with all of the modern German literature and all of the old. Dr. von Sallmann, who as I've said was one of the authorities at that time on the old literature, said that Wolfgang had a very, very wide knowledge of the old literature, which most of the young German boys did not have. He was delighted that he did because so many things in the past have something to do with what's going on today.

So Lieb came down here and our relationship with him was just ideal; we couldn't have had a better man. He worked well with Bill Ham and he worked with our department, and then he worked with the whole medical school. He gave some lectures to the medical students, and he also taught at the graduate level. He gave papers at meetings and just turned out to be a real solid individual.

We hated to see him go, but he had a better offer in Germany. His old professor and mentor, Professor [Rudolph] Thiel, had seen him at the International Congress [of Ophthalmology] in Belgium and told him that he was going to have to get somebody to succeed him before too long and that if Wolfgang would come back and work with him in his department, he would very much appreciate it; he was going to be able to pick his successor and he would be happy to pick Wolfgang. Wolfgang told Professor Thiel that he felt obligated to stay with us until we could get somebody to take his place.

Then he came on back and told me that he was going to leave, and he said, "I've got somebody in mind that can do just as good a job as I'm doing. He's an intern on surgery. He's been spending a lot of time with me in the laboratory and I've already been showing him things because I thought we might want to recruit him even if I didn't return to Germany. This guy's name is Walter Geeraets." I said, "We certainly will miss you and I don't know that Geeraets can ever do the things that you've done and whether we would be as happy with him or not, but it certainly

sounds, from what you say, that he'd be quite satisfactory. That suits me if it suits you." He said, "I'll bring him around and let you talk to him." So he did, and then when Lieb left, Geeraets came in, and he'd already been broken in so we didn't have to worry about it.

Lieb was indefatigable as far as work went, and so was Geeraets. I've never seen two harder-working people.

Hughes: The two of them got along well?

Guerry: They got along well the short time that they worked together. I'd say it was a period of around six months. Wolfgang said, "Professor Guerry, I'm not going to leave you with a green hand. He will be well trained before I take my leave." Since they had already been working together for some several months, Walter knew just about as much as Wolfgang did about lab protocol and the research instruments that we were using. I will say that before Wolfgang left, he finished all of the projects that we had going at that time. Maybe there were one or two slop-overs that Geeraets took over after that.

Walter J. Geeraets

Hughes: I would like to hear about Geeraets's background.

Guerry: Geeraets was one of the brightest people I've ever known. He was sort of a universal man. He was a musician; he had absolute pitch. He played several instruments, he was well educated, he wrote beautifully in German and English—not fiction, but scientifically—and he was just really a super guy. He had come over here from Holland and had applied for an internship in the Department of Surgery. During the war, he worked for American Intelligence as an interpreter. He and his wife were originally from Holland, and he had been educated in Germany. That's how he learned German. He had a medical education and a medical degree. I don't know how he happened to come to the Medical College. All I know is that he surfaced in the Department of Surgery as an intern and that we recruited him from there.

Hughes: Did he train in ophthalmology?

Guerry: Yes, he had some ophthalmological training too.

Hughes: But not a formal residency?

Guerry: Not a formal residency, but he'd worked in some of the clinics there and knew a lot about ophthalmology. He learned a tremendous amount of ophthalmology while he was here.

Hughes: What was his particular contribution to the research effort?

Guerry: He was an extraordinary fellow insofar as being widely read and devoted to basic as well as clinical research. He had a tremendous knowledge of ophthalmic literature. He reminded me of Dr. von Sallmann, who had the best and most profound knowledge of the older literature, and I think Geeraets had the most profound knowledge of the modern literature of anybody that I've known. He read all the time. He had made a lot of innovations. Also, he was the kind of fellow that you could work with. If I had an idea I'd say, "Well, I think we ought to do thus-and-so," and he immediately would say, "I think that's a splendid idea. Why don't we do it?" If he didn't think it merited doing, he'd say, "I don't think we ought to mess with that," and I'd say, "Let's do it anyhow," and he wasn't upset about that; we'd go on and do it anyhow. Sometimes it turned out to be something worthwhile, sometimes it didn't. But we worked together as a team and he was a great researcher—very methodical and an absolute stickler for interpreting data properly. If Geeraets came out with a finding, you knew it was accurate.

Hughes: Was that his personality or was that his European training?

Guerry: I think it was both. A lot of it was his own personal feeling, because I've known some other Europeans that didn't necessarily feel that way. He had the right mix for this sort of research.

Hughes: There was a symposium on research on light coagulation sponsored by the department of ophthalmology in 1963 under the auspices of ARVO [Association for Research in Vision and Ophthalmology]. Do you remember that?*

Guerry: I remember that we had one, but I don't remember the details of it.

Hughes: Was the symposium your idea?

Guerry: No, that was not my idea. That was the basic boys that did that.

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* Ibid, p. 16.

Retinal Detachment Surgery*

Ernst Custodis

Hughes: *Let's talk about retinal detachment surgery. I believe it was [Ernst] Custodis in Europe who maintained it was not necessary to siphon off the subretinal fluid.** The feeling for many years in this country was that you did have to get rid of the subretinal fluid.*

Guerry: The truth of the matter is that the way Custodis worked his surgery, he would put a plomben or an explant under the area of the hole in the sclera, and then he would push the choroid up against the retinal hole by tightening the sutures on the plomben. He didn't drain his fluid because he found that if you did that and then you treated the area with diathermy—or later on you could do it with the laser—the hole would close itself off. We had always felt that if you didn't have it absolutely dry, the hole wouldn't close off, even after the diathermy. That's why we did all the fluid draining. Custodis revolutionized that with the explant which he used to push the choroid up against the hole. But you still had to treat the hole with something to make it close off.

Hughes: *But it was true that you didn't need to drain off the subretinal fluid?*

Guerry: In most instances, you didn't have to. But if you had a pretty good-sized hole and a tremendous amount of fluid, it was almost impossible to push the explant and the choroid into the eye, indenting the eye as it were, to where the hole would rest on the explant and the area would then be effectively closed off. Custodis would just tap the anterior chamber and let the aqueous [humor] out and keep letting aqueous out until the eye was so soft that you could do that. But in many instances, this was very difficult.

Hughes: *What was your usual procedure with the laser?*

Guerry: We used the laser in cases where there was a retinal tear without a true detachment. Of course, we also used it during and after surgery. For instance, if you did surgery and found later on that you hadn't covered the area of the hole and its surround properly, you could zap the patients with the laser without having to take

* For more on this subject, see Dr. Pischel's oral history in this series.

** Norton EWD. The past 25 years of surgery. *Am J Ophthalmol* 1975; 80:450-459.

them to surgery. In the old days, if you had that happen, you'd have to take them back to surgery and go back in and re-treat the area.

Hughes: Did you ever use any of the retinal pins that Drs. Pischel and [Clifford] Walker invented?

Guerry: That's what we used to begin with, in the old days.

Hughes: That was before photocoagulation.

Guerry: Yes, way before then. When I was at Manhattan in nose and throat, they were using them there; that was before I went to the eye institute [at Columbia]. When I got to the institute, they were using them there.

Hughes: In combination with diathermy?

Guerry: Absolutely. They had a Walker machine; he developed the diathermy machine that had his name on it. Dohrm Pischel was one of the real pioneers in retinal detachment.

Charles Schepens

Hughes: Now that we're on the subject of retinal detachment surgery, do you want to make a comment about some of the other techniques that were used? I'm thinking particularly of [Charles] Schepens's work.

Guerry: You've got to give Schepens credit for really being the pioneer in modern detachment surgery in this country because when he started doing his work in Boston, retinal surgery was pretty primitive. His indirect ophthalmoscopy with indentation followed by encircling procedures was really the beginning of modern detachment surgery. The cure rates of detachment improved tremendously after his work. I think he should be given credit for pioneering modern detachment surgery.

Hughes: Gonin had emphasized the importance of sealing off the retinal hole—

Guerry: He did.

Hughes: Was it the fact that Schepens combined that goal with his indirect ophthalmoscope that advanced retinal detachment surgery?

Guerry: When Gonin and others were working with the regular [direct] ophthalmoscope, you had to be a super-duper examiner to pick up the holes. There were a lot of holes that you could not see with the direct ophthalmoscope. Consequently, a lot of cases were never cured because the holes were never found.

Hughes: Is that because they were towards the periphery?

Guerry: Yes, a lot of them. And then also if, for instance, there were cicatricial changes, there might be a hole somewhere, but you might not be able to see it. A lot of little tiny holes at the ora serrata are almost impossible to see without doing indentation and using the indirect ophthalmoscope; they just don't show up with the direct ophthalmoscope. Nobody was using indentation in those days. When I was at the eye institute before we had Schepens's method, I guess we cured thirty percent, and we thought that was pretty good.

Hughes: And that was using diathermy and pins.

Guerry: And that was using diathermy with pins, or some modification of penetrating for draining the subretinal fluid and then using surface diathermy.

Hughes: Was it Schepens that introduced indentation?

Guerry: Absolutely. He's the one that really began indenting. Graham Clark was doing detachment work at the eye institute after I left, and Dunnington sent him up to see what was going on in Schepens's clinic. Graham came back and said that Schepens was taking an indenter and punching around the eyeball all the way and using this indirect 'scope to do retinal detachment. Dr. Dunnington said, "Well, my goodness. You mean all that pushing and shoving there?" And Graham told him he was astounded also, but it seemed to work.

Graham learned the technique, and he came back and started doing it, and the cure rate increased by about fifty percent. Nowadays, even those horrible, hopeless cases of detachment that we wouldn't have operated on in the old days can now be operated successfully utilizing our newer techniques.

The Scleral Buckle

Hughes: Is Schepens indeed the inventor of the scleral buckle?

Guerry: I think he is. I don't know of anybody that was ahead of him. Of course, Custodis came along and did pretty much the same sort of

thing, but he didn't do any dissections; he simply indented the sclera with an external plomben. Custodis was getting good results without doing any dissections.

Hughes: Was the scleral buckle used only in cases where the detachment was quite elevated?

Guerry: You had to use them in those. In the simple detachments where you had very little involvement, you might get by without it. If you had a case where you had a retinal tear and no detachment, or a very shallow detachment, you could probably get by without doing anything except just treating this area with surface diathermy and draining fluid. But in the majority of cases where you have several holes or you've got a big hole or you've got an area that is apt to cause problems, you do an encircling procedure.

Hughes: Did you adopt the buckle technique quickly?

Guerry: Yes, I used it right from the very beginning. The Spaniards, specifically Count [Hermenegildo] Arruga, came out with an encircling technique that caused a lot of problems. I did a few of those where you would place a suture all the way around the globe and pull it up and drain fluid and treat. A lot of the retinas went back on. But after anywhere from about six months to a year and a half, in many cases the suture would erode through the sclera into the globe.

Hughes: I saw a reference to supramid thread. Is that what you're referring to?

Guerry: Yes, that's right. Just one suture all the way around the globe. You just tack it onto the sclera all the way around and pull it up. It's such a simple thing to do. You'd pull that thread up and drain the fluid, and the whole thing would take probably a fourth or fifth of the time it would take to do a buckle with scleral resection. For a good many years they did complete scleral resections, and then in later years they didn't. Schepens and his group developed many of those techniques.

Hughes: Different types of materials were tried for the buckle, were they not?

Guerry: Exactly. Schepens was a pioneer in that too.

Sickle-Cell Retinopathy

Hughes: In 1959, you published a monograph on sickle-cell retinopathy. I was wondering how that came about.*

Guerry: We see a tremendous amount of sickle-cell retinopathy because of the size of our black population in Richmond, so we felt that this was a natural subject for us to get interested in. When Wolfgang Lieb was with me, he became very much interested in this as a research project. We collected innumerable cases, and then we divided them up into the type of sickle-cell disease that they had and found out which ones had vascular problems. We wrote what was for many years a definitive monograph on sickle-cell retinopathy until Mort Goldberg published a monograph some five or six years ago based on fluorescein angiography, which we didn't have in those days. We never got into it after fluorescein came in.

Hughes: Did you devise the classification of sickle-cell disease?

Guerry: No, that classification had been in the literature.

Hughes: What was its basis?

Guerry: The classification of sickle-cell retinopathy is somewhat like the classification of diabetic retinopathy. The first stage has to do with increased tortuosity of the retinal vessels and some increase in the distension of the veins, particularly on the venous side. In grade two, you begin to get ischemic areas with retinal edema and some sheathing of peripheral vessels, and also occasional neovascularizations and some microaneurysms, which are similar to those you see in diabetes. Then you get stasis and a sausagelike appearance of the peripheral veins. In grade three, you get retinal and choroidal degeneration and atrophy, fresh, old, then pre-, intra- and subretinal hemorrhages, and cholesterol. Then in grade four, you begin to get vitreous proliferans with more vitreous hemorrhages, as you do in diabetic retinopathy, and you can get central artery or vein occlusion. So all in all, it's pretty much like a diabetic retinopathy classification.

Hughes: I gathered from the paper that you did find a statistical correlation between the severity of the fundus pathology and the severity of the sickle-cell disease.

Guerry: That's exactly right.

* Lieb WA, Geeraets WJ, Guerry D. Sickle-cell retinopathy: ocular and systemic manifestations of sickle-cell disease. *Acta Ophthalmol* 1959; 58:1–58.

Hughes: Was that a new finding?

Guerry: I don't think this was the first time it was described, but we brought it out into the light of day and people began to take an interest in it.

Development of the Intraocular Lens

Harold Ridley

[Interview 5: April 11, 1990, the Guerry home outside Richmond, Virginia]

Hughes: Dr. Guerry, according to your paper of 1960, Dr. [Harold] Ridley first reported the feasibility of the intraocular lens in 1951. Could you tell me a little about his work?*

Guerry: Ridley was the real pioneer in intraocular lenses. A lot of people had considered the idea of replacing the crystalline lens, but nobody had done it from a practical or pragmatic standpoint until Ridley came along and reported his work in 1951. What he did was to develop a plastic lenticula made out of PMMA—polymethyl methacrylate. The reason that he used this material was that during the Battle of Britain a fair number of pilots were shot down and suffered injuries of the eye. In some of these, splinters of polymethyl methacrylate from windshields in the airplanes entered the cornea. When this happened, the material was completely inert. It just didn't kick up any reaction at all, and it could be left in situ and the eye would heal without any problem.

With that in mind, and the fact that glass was so heavy, Ridley decided this would make an ideal material for an intraocular lens. He would do an extracapsular cataract [extraction] very much as we do today. This would leave a bag with the zonular fibers and the posterior lens capsule intact, and he would just shove one of these lenses into place and it would sit there. He did it through a dilated pupil and then after that he would bring the pupil down. It's surprising how well this was tolerated.

The great difficulty was that the lens, in spite of using lightweight polymethyl methacrylate and not glass, was still heavy, and the trauma incident to everyday living, with people walking around and turning the eye from one side to the other,

* Guerry D. Present status of the anterior chamber lens. *Am J Ophthalmol* 1960; 50:250–258.

was sufficient to dislocate a lot of these lenses. So a fair number of them would dislocate into the vitreous. Usually when that happened, the zonule was impaired and you didn't have any way of seating the lens properly. Then others began to think about this problem, and that's when they came up with the anterior chamber lenses with little feet that hold them in place in the angle.

Hughes: Did Dr. Ridley remove the lens and then insert the lenticula in one step?

Guerry: All at the same time. He did it with an extracapsular extraction because he needed the posterior capsule and the zonular fibers intact. If you tried to do an intracapsular extraction, of course, the lenticula would immediately dislocate into the vitreous.

Hughes: Did he ever consider an anterior chamber lens?

Guerry: Not to my knowledge. But Ridley's work set everybody to working on an intraocular lens, and we became interested in it in our laboratory at the Medical College. Wolfgang Lieb was with me at the time, and he had some German friends, Dannheim and others. Wolfgang had been to Europe at just about this time, 1955, and when he came back he talked to me about the Dannheim lens and how successful it had been. So we became very much interested in it in our laboratory.

Wolfgang and I were working with various materials. We ran the gamut on those and published several articles* about the materials that seemed to be of the proper weight and also with optical properties similar to glass and PMMA that we felt might possibly turn out to be better for a lenticula. But in spite of all this work that we and others did, PMMA turned out to be the best material that we possibly could use, and we're still using it today.

Other Early Contributors

Hughes: What was the reaction to Ridley's work?

Guerry: It opened up a whole new vista. This was the sort of thing that people had been thinking about for years, but nobody had ever brought this kind of work to fruition. Everybody started doing experimental work on intraocular lenses, here and abroad. The

* Lieb WA, Geeraets W, Guerry D, Dickerson J. Tissue tolerance of plastic resins. *Eye Ear Nose Throat Mon* 1959; 38:210–215; 303–321.

Spanish got in on the act—Arruga and Barraquer—and the Italians, particularly Bietti.

Hughes: What did the Dannheim lens look like?

Guerry: The Dannheim lens had loops of supramid that were attached to the lenticula—a loop below it, a loop above. It wasn't long after that before other kinds of loops were added by various and sundry workers in the field. But the Dannheim lens was particularly easy to manipulate. That was why we used it in a lot of animals and finally in some humans.

Then we developed a lens that was very much like the Dannheim lens, but it had a few advantages in the way the loops were attached to the lenticula, making insertion easier. The problem with our lens, and with all of these lenses that had supramid as the material for the loop, was that they biodegraded over a period of anywhere from a year to three or four years. When they did, they lost their tensile strength, and as a result, the lenses would dislocate. This happened in a fair number of cases. In the ones that didn't dislocate even after the loops degraded and lost their tensile strength, there was enough inflammatory reaction set up previously to anchor the lens in place with scar tissue. Those did exceptionally well.

We put in about forty and then sat around to watch them and see how they were going to do. Twenty-five years later, we had four cases that were still in and serviceable with useful vision. You say, "What happened to all those others?" Well, many had to be taken out. For one reason or another, they became dislocated and the eye may have remained quiet. In those cases, you didn't do anything unless you wanted to replace it with another lens.

Hughes: You removed the lenses over a period of many years?

Guerry: That's right. That was over a period of twenty, twenty-five years. And that wasn't only our experience; it was the experience of many other workers. As a matter of fact, the immediate reaction to the lenses over the short haul was fairly good, but it was bad enough so that everybody began to wonder whether this was the way to go. As a consequence, people went back to doing intracapsular extractions and fitting patients with contact lenses and with aphakic glasses.

A few people continued inserting intraocular lenses, and more and more people gradually developed lenses that were infinitely superior in every respect to the ones that we had used, although they still used PMMA for the lenticular material. These were

perfected, and as time went by more and more of them were inserted. It seemed the way to go, and sure enough, it's turned out to be a great boon.

I must say that in the last ten to fifteen years, intraocular lenses have come into their own. We're not using anterior chamber lenses any more, except in rare cases. In cases where there's no other way of solving the problem, you put one in. But the way to go now is to do an extracapsular extraction, as was done in the old days. That preserves the posterior lens capsule so a posterior chamber lens with J or C loops is placed in the capsular bag. Recently, lenses have been developed so that they can be folded and inserted through a very small insertion.

Hughes: You mentioned that Dr. Ridley opened up the field of the intraocular lens, but I also understand that he opened up a great deal of hostility as well. Would you care to say something about that?

Guerry: That's certainly true. Ridley really did not pursue new avenues in developing the lens, and that was taken by different people in different areas. You had Strampelli and Bietti doing work in Italy, Barraquer in Spain, and Dannheim in Germany, and we were working on it in this country along with [Warren S.] Reese and his group in Philadelphia. Dr. Reese did some pioneer work and was recognized as one of the early people in this field, certainly one of the earliest in this country. So there was a coterie of people all over, doing work in this field, all of them working with PMMA. Most of them had gone to anterior chamber lenses.

In Britain, when things sort of fell into the doldrums, people began to have bad results with the anterior chamber lenses that had been developed and implanted. Peter Choyce still continued to hold the banner high and held the fort until enthusiasm was revived. I think Choyce should be commended because he insisted that the intraocular lens was the way to go in spite of the bad results that people were having, including himself. But he kept the field alive until other people got into it and developed lenses that really were the modern prototypes of posterior chamber lenses. He really never came around to posterior chamber lenses, but his work in the field was very valuable because of the fact that he kept the idea alive in spite of great odds.

Hughes: What lens was he using?

Guerry: He was using one that he developed himself, which was what we used to call the plate type. It wasn't anything but a plate of PMMA with a lenticula right in the center. It had a couple of little horns on one end, and the side that you inserted wasn't a point but sort of a rounded area. He'd do an intracapsular extraction and shove the lens into the anterior chamber. The problem with this was that if you didn't get an exact fit, or even if you did get an exact fit, if the patient blinked or squeezed his eyes, it could be very uncomfortable, and at times, painful. That's why people went for the lenses that had the flexible mounts. Choyce never really gave up on that; he continued to use modifications of his lens. He put in thousands of them, and he got into difficulties as everybody did with lenses in those days, but he probably didn't have any more than his share of problems. In recent years, he has resorted to extracap with posterior chamber lenses.

Joaquin Barraquer put in over a thousand lenses, similar to the one that Dannheim had developed and that we had modified. I saw him in San Francisco some years after that, and he said, "That was one of the saddest experiences in my life, to see how many of them went sour, and we had to take the lenses out, and unfortunately we had to take a few eyes out, too. I don't want to live through that again. I'm glad with the modifications now that everything has settled down."

Some—I've forgotten who they were—were putting in anterior chamber lenses in myopes, without taking the lens out; putting a lens in to keep the people from being myopic. These were real disasters because here you had a perfectly normal eye except for the fact it was myopic. Most of them developed cataracts and the implanted lens and cataract would have to be removed and some eyes were lost. This was very unfortunate, but luckily very few were operated in that fashion.

Contributions by Dr. Guerry's Group

Hughes: One of your ex-residents told me they were under instructions, I presume from you, to report whenever they found a patient with lenses that you had inserted, and then the lens was taken out. What were the usual problems?*

Guerry: Uveitis and glaucoma were the worst problems, and the combination of uveitis and glaucoma, the so-called "UGH" syndrome. There were some cases of sympathetic ophthalmia as a result of those, too. There weren't a whole lot of them, but

* Interview with Dr. John Barber, New Orleans, October 30, 1989.

there were enough to frighten the ophthalmic community. Luckily, we didn't have any.

Hughes: Was the glaucoma due to disruption of aqueous dynamics?

Guerry: It was twofold. In the anterior chamber lenses that we used, the footplate would compromise a certain part of the filtration angle. Not only that, the uveitis with its inflammatory reaction was sufficient with this turbid fluid to close up the filtration angles, and you'd get a secondary glaucoma. A high percentage of them had that sort of condition. You could look in with a slit lamp and see a dense flare from cells and proteinous material due to the high protein content of the aqueous humor and numerous cells.

Hughes: Who was making the lenses?

Guerry: The modified Dannheim lenses that we used were manufactured for us by Mr. Morcher in Stuttgart. It was about this time that the Titmus Optical Company in Petersburg, Virginia became interested in these lenses. As I told you, they had been helping fund our lab in the Department of Ophthalmology through the Titmus Foundation. They were actually acting as distributors of the lens for people who were interested in it. If you wanted one, all you had to do was write to Titmus. They'd ask you the size of the cornea, and they would then send you one. People had to take courses in how to put the lens in.

Hughes: Who designed your lens?

Guerry: We designed ours. Morcher, who was making the Dannheim lens in Germany, made our modification of the Dannheim lens. Wolfgang actually got a patent on our modification. Strangely enough, in recent years, maybe as recently as two to three years ago when various manufacturers of intraocular lenses were feuding with each other, one company was being sued by another one—I've forgotten who the suer was and who the suee was—but their defense in court was that they had copied our lens, and the patents had run out on our lens. Consequently, these people couldn't sue because the patent had expired. [laughs]

Hughes: Were you the first to insert an intraocular lens in this country?

Guerry: No, I was not. As a matter of fact, the first one was probably Reese in Philadelphia. But I'm not sure of that.

Hughes: It was largely Lieb who was keeping up with developments in Europe?

Guerry: Yes, it was.

Hughes: Wasn't the first lens that you inserted a Schreck lens?

Guerry: Yes, that's right. We didn't like it, and we switched over to the Dannheim, and then we switched to our modification of the lens.

Hughes: How had you modified the Dannheim?

Guerry: The modification was just enough to get a patent on it. The insertion of our foot loops was tangential, and in the Dannheim lens the loops were actually inserted by drilling holes into the periphery of the lenticula.

Hughes: Who supplied the different materials that Dr. Lieb was testing?

Guerry: You can get these materials from any supply outfit.

Hughes: So you had a set of criteria and then you looked for materials that would fit those.

Guerry: Exactly. Silicone was one of the things that we investigated. Some silicone lenses were actually developed, but they really never took. They never proved practical. One of the problems with silicone is that the stuff doesn't wet very well. In a wet environment, it doesn't act like glass or like PMMA. I don't believe there's really any material that's going to come out that can surpass PMMA.

Glass has been tried, as you know; a lot of glass lenses were inserted. The problem with them is that they crack, particularly if you wanted to zap them with the laser to do an iridotomy or open the posterior capsule of a secondary cataract. This turned out to be a troublesome thing, and a lot of them had to be taken out. A fair number of them would crack and stay in there, and it bothered the patient from an optical standpoint. Every time a patient would get out in the sunlight, it would strike the crack in the lens, and the patient would get aberrant rays that resulted in dazzle.

I discussed Ridley's lens and the other lenses which had been developed in a paper I gave at the University of Chicago in 1960.* Derrick Vail was professor at the time and invited me to give this talk before the Chicago Ophthalmological Society. He said, "DuPont, I just want to ask you one question. If these things dislocate and go into the vitreous, and then you put another one in and it dislocates in the vitreous, what do you do? Do you just

* Guerry D. Present status of the anterior chamber lens. *Am J Ophthalmol* 1960; 50:250–258.

fill the eye up with the durn things?" [laughter] Naturally, that brought down the house. I had to assure him that after two dislocated, you didn't put in any more. We didn't want the eye to be a marble bag. [laughter] Derrick Vail was one of America's great ophthalmologists and was in charge of the American ophthalmic effort in England in World War II.

Hughes: I got the idea from talking to people that some of the reactions to the lenses were simply because of impurities.

Guerry: There's no question about it. It took us some several years and a great deal of stress and sorrow to find that out.

Also, a lot of it had to do with sterilization techniques. Certain methods of sterilization left materials on the lenticula that were irritating, and this caused a lot of problems. The problem was finally solved when it was found that sterilization was a factor. That didn't continue to be a problem, but it was one of the worst problems that we had in intraocular lens development.

Hughes: What means of sterilization were you using?

Guerry: We ourselves weren't using any, but manufacturers were.

We made a few primitive lenses ourselves in our own laboratory and tried them out on rabbits, but we never used any of those in humans. I must say, in the animals that we used them in, we got a lot of reaction. That's one of the reasons that we never pursued lens manufacture ourselves.

Hughes: The lenses that you were receiving were sterile.

Guerry: They were sterile. We never had any problems with the sterility of the ones that we got from Germany.

Dr. Guerry's Surgical Procedure

Hughes: How did you choose patients in the early days?

Guerry: For those forty that we did, we had very strict criteria. We only did procedures in people who had one good eye, and the other eye was involved, and they wanted to get binocularity. Having a good eye was the main criterion that we used. We wouldn't put a lens in both eyes; we'd just put it in one eye. The majority of ours were traumatic cases and many were youngsters.

The second criterion was we had to be absolutely certain that the patient had no evidence of glaucoma or uveitis or any underlying ocular disease that might preclude getting a good result. The

majority were cases in which the patient had a secondary membrane as a result of a traumatic cataract, and this would frequently have to be needled after the lens was put in. We had almost no cases where there had been an intracapsular cataract extraction carried out. Most of them were in extracaps, which were the ideal cases. Of course, this is the way it's done today.

The way to do it is to take the lens out extracapsularly and put the lenticula in the posterior chamber. We put ours in the anterior chamber at that time because we thought that was the best way to go.

Hughes: Am I right that you devised a slightly new surgical technique for insertion of the lens?

Guerry: Most of our cases were old traumatic cases with secondary membranes. In these cases, no extraction was necessary. The lens that we developed needed a special type of forceps for insertion. A small incision just larger than the lenticula was made at 12:00 o'clock at the limbus, and the lens held by the forceps would be pushed into the anterior chamber. The loops would fold back until they were well into the anterior chamber, at which time they would unfold and each wing would seat itself horizontally in the angle. If either wing did not seat properly, a small spike with a Y-shaped notch on the end was used to seat the offending wing. If there was an old inflammatory membrane or a secondary cataract, it would then be needled and the wound closed with a single suture. Most lenses were inserted horizontally because that was the simplest way to handle them.

Hughes: Did you have to develop that forceps as well?

Guerry: Yes, we developed the forceps.

Hughes: What was the reaction of your colleagues to the first lenses that you inserted?

Guerry: I think the ophthalmic community in general was interested, not only in our lens but in the work that everybody else was doing in the field. We had a young fellow named [Luther] Brawner in Richmond who had actually put in two lenses of the Ridley type. He was collecting a group to put some more in, and he was killed in an airplane accident, so he never got a chance to do anything more. To my knowledge, he was the first one in our state to put in a Ridley lens. He was a very good ophthalmic surgeon.

Hughes: Do you have any comment about how many of the bad results, not just here but also abroad, were due to inexperience or poor

surgical technique rather than to problems with the lenticula itself?

Guerry: I can't give you a number or a percentage, but I can tell you that the incidence was high. Because with the crude lenses that we had at that time, if you were not a very meticulous, skillful operator and you added that to the problems that you already had with the design of the lenses themselves, you had a whole bunch of strikes against you. So there's no question that technique had a lot to do with the failure rate. One reason that Ridley did as well as he did was that he was an extraordinarily clever surgeon. Many people that attempted to use the Ridley lens didn't do as well with it, largely because of ineptness.

Hughes: Did you ever encounter any hostility when the lenses began to fail and you had to take them out?

Guerry: We didn't, not from the patients or from the medical community. The majority felt that this was a progressive movement and that we had to do it to see how things were going to go. Then when the tide changed because of the many problems that we did have, I don't think we got any real hostility. People would just say, "That's the way medicine has always evolved." You do things, and a lot of them turn out good and they seem to be the way things should be, and then it turns out that that isn't the way it is. Eventually, when it settles down and things improve, you're back in business again. I don't think that there was any more trouble with the intraocular lens than there was with most any sort of innovation. That was the reason for limiting our cases to forty in order to see how they fared before going overboard.

Hughes: Did you describe the experimental nature of the procedure to the patients before surgery?

Guerry: Oh, absolutely. If we were trying to do that work today, with this litigious society that we live in, we just couldn't do it. But people were more forgiving and understanding in those days. This business of suing doctors was such a rare thing that you really didn't consider it. We did give them consent forms. The forms stated that the patient understood and had been given full information, that this was an experimental procedure, and that we can promise nothing, but we would do the best we could.

Hughes: Had you used consent forms with photocoagulation?

Guerry: We did have consent forms, but the consent forms weren't nearly as strict as the ones with the cataracts, because we didn't feel and

the people in general didn't feel, that there were as many chances of getting into difficulties as there were with the intraocular lens.

Hughes: Was there ever a lawsuit?

Guerry: There were some, but we didn't have any. They did occur, but they were surprisingly few. In thinking back on it, I don't remember more than two or three.

Hughes: In 1959, you had an exhibit on the intraocular lens at the annual meeting of the Academy.

Guerry: We won the blue ribbon that year. This was a surprisingly good exhibit, and it showed all the techniques and results, and really pretty well summarized the intraocular lens situation at that time. We got a lot of compliments. I remember after we set it up, I'd spend some time at the exhibit, and then Wolfgang would spend some time there, along with other members of the department who had worked with us. Everybody that came around was intrigued by it. When the judges came by and put the ribbon on it, we were really excited. It was nice to know that the work was appreciated.

We had a great department for building exhibits at the Medical College of Virginia. This wasn't just a tin-horn thing; it was really an extraordinarily good exhibit. The people who helped us design the exhibit were very talented. We had all the material and then the Department of Visual Education designed it and put it together for us. They actually went up there with us and helped set it up.

Revival of Interest in the Intraocular Lens

Hughes: Who was responsible for reviving interest in intraocular lenses?

Guerry: The people that revived it were generally recognized by the ophthalmic community as being avant-garde types. A lot of them at the time were frowned upon because it was felt that they were doing things that were really outside of the norm—not all of them, but some.

Hughes: You mean taking unnecessary risks?

Guerry: Yes, in spite of the bad experience that many had had, these individuals persisted. They felt that the idea per se was good and all that was necessary was to improve both techniques and products. Dr. Norton and his group at Bascom Palmer were instrumental in setting up guidelines for monitoring and

evaluating the intraocular lens studies, and this brought discipline to what had been chaos.

*Hughes: When I asked Dr. Norton whom he thought was responsible for reviving interest in the intraocular lens, he mentioned Norm Jaffe.**

Guerry: I think Jaffe was responsible, or certainly one of the first ones. And you still had Choyce, our British friend, that had done all this work in the past. He had stuck through all of this and had kept intraocular lens research going. A lot of that came back from British soil to this country and kept Jaffe and a few others interested and productive. I do think Ed's probably right that Jaffe had as much to do with it as anybody.

Hughes: Why the revival of interest?

Guerry: The fact that they were developing lenses that were better tolerated. People like Jaffe were using materials and techniques that were less traumatic and lenses that were not reactive.

Another chap named Jim Gills, who was also operating in Florida, was one of the very, very early ones. I guess he's probably done more lens insertions than anybody in the world, somewhere between ten and fifteen thousand. He operates about five or six days a week and does about fifteen, twenty cases a day. He is an old Virginia boy. He trained with Ed Maumenee and worked with Banks Anderson at Duke. Then he decided that he wanted to be an intraocular lens man, and he moved to Florida and set up shop.

Hughes: Please comment on the five-year study of intraocular lenses in Miami.

Guerry: I think that was the real thing that put the intraocular lens on the right course. Up until that time, nobody really knew for sure whether we were doing a good or a bad thing. What this study did was limit the cases that were done to people whose life expectancy was probably not more than about four or five years. If you're going to have complications, you probably wouldn't have them in that length of time, based on the experience we'd had previously. So that was one of the best documents that was ever drawn up. It caught on immediately, and everybody pretty well abided by it. Jaffe worked with Ed Norton in getting all that started.

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* Norton interview, November 2, 1989.

Hughes: Did you ever put intraocular lenses in again?

Guerry: I did put a few in, but I didn't go into it like gang busters. By that time, I was interested in other things. In my own mind, I still wasn't sold on it. I had seen enough of the bad so that I really never got in on the new wave.

*Hughes: Dr. Barber thought that ophthalmologists in Richmond didn't put in intraocular lenses until eight to ten years ago.**

Guerry: That's right.

Hughes: Because of the bad experience.

Guerry: Exactly. I think that's absolutely true.

Hughes: But you weren't going around and saying—

Guerry: No, we weren't bad-mouthing it. We just weren't doing it ourselves.

*Hughes: Dr. Norton also told me about a moratorium on the insertion of intraocular lenses in the Miami area.** What was that about?*

Guerry: I think the moratorium came before they put in the five-year plan. They had a general survey, and everybody said, "Look, we're not about to quit doing intraocular lenses." So they worked out a compromise, and the compromise was the five-year moratorium. They said, "We'll go along with something like that, but we're not going to quit doing it, because we think we're doing a good thing and it's the wave of the future." The five-year plan was a compromise—and a good one.

Hughes: It was quite an accomplishment to get agreement for a study.

Guerry: Oh, absolutely. I don't know anybody who could have done it but Norton. He's one of the great powers that be in ophthalmology, in negotiating. He would be a great negotiator in any field. He'd out-negotiate most of the lawyers. [laughter] What he's done with Bascom Palmer is unbelievable. If I had to pick from all the institutions in the country right now, I'd put Bascom Palmer first. That's where Ken [Guerry] went for his residency. Ken right now thinks that that's far and away the best. Of course, there are a lot of people that would argue that point. But if you get an unbiased committee together and it surveys all of the eye

* Barber interview, October 30, 1989.

** Norton interview, November 2, 1989.

departments in the country, Miami is in the top two, from what I've seen. And that's all Norton's doing.

Hughes: Is that mainly a matter of selecting the right people?

Guerry: He is the modern John Wheeler. Norton did for Miami what John Wheeler did for the eye institute at Columbia. Luckily, he's been able to stay in there, because he was just a young fellow when he got Bascom Palmer off the ground, and he's still going strong. I don't know anybody I admire more. He's done as much for ophthalmology as any single person in this country, perhaps in the world.

Hughes: What makes him outstanding?

Guerry: Well, you've got to be smart first, and you've got to have a temperament that allows you to operate in an academic environment and at the same time work with the town people—the old town and gown syndrome. He is one of the most extraordinary people in being able to negotiate. The town people in Miami just think he hung the moon, and the academicians feel the same way about him, so there's never been any problem.

If we'd had somebody like Norton in Richmond to negotiate between our eye hospital and the Medical College, we would have brought that problem to heel years ago. I don't know whether even Ed could have done it in Richmond, but if it was doable, he would have been the one that could have done it. The whole time I was chairman, I was trying to work out a rapprochement with the eye hospital. The eye hospital didn't trust the Medical College. The Medical College didn't trust the eye hospital people. They've never been able to work it out, even now. We've had agreements signed and sealed, which never got off the ground. It's a shame, because we could have had one of the great eye institutes in the country.

Hughes: Is there anything more you want to say about intraocular lenses?

Guerry: I can wind up by saying there's no question that they're here to stay. They have evolved to the point that they are probably one of the greatest things that we have in ophthalmology today. Like everything else, they have been abused and are being abused today. There are some cases being done that don't need to be done.

If I had to have a cataract extraction done now, I'd have an extracapsular extraction with posterior chamber implant. And I would go to someone who does a large volume of cases not

someone who does one every six months, because, there's no question about it, technique is one of the most important things. If you get a lousy technician and the best lens in the world, you can still get a sorry result.

Choroidal Detachment, 1975

Hughes: The next topic is your paper on choroidal detachment. Please start with a description of the problem.*

Guerry: Arteriovenous [AV] low-pressure shunts have been recognized for some several years, particularly by the neurologists and the neurosurgeons. But it's only been in very recent years that it was realized that these low-pressure shunts could give rise to severe ocular problems, such as choroidal detachments which could be misdiagnosed as melanomas. The modus operandi is that as a result of an arteriovenous shunt, arterial blood enters the vein and builds up the venous pressure in the eye. As a result, the choroidal circulation is completely discombobulated and fluid oozes into the suprachoroidal space resulting in a choroidal detachment.

In the particular case that we recorded, the patient was an old professor of mine at the University of Virginia, and he'd been seen at the University of Virginia. They referred him to me at his behest. We realized that he had choroidal detachments, so we started working with the Department of Neurosurgery, John Harbison and his group. Routine x-rays didn't show anything. Then they did x-rays with some subtraction and picked up the shunt. We found that that was the trouble. Then the question was what we ought to do about it.

Hughes: Who had the idea of looking for a shunt?

Guerry: It was a group decision, but the neuro people were really responsible for making a diagnosis. We knew that there was something going on that had to do with the backup of blood and the increase in the venous pressure. But it wasn't the type of AV fistula that you are used to where you get a bruit, because that's what we had suspected. But there was no bruit, and this lesion was such a subtle one that with ordinary x-ray techniques available at that time, you really couldn't pick it up without

* Guerry D, Harbison JW, Wiesinger H. Bilateral choroidal detachment and fluctuating proptosis secondary to bilateral dural arteriovenous fistula treated with transcranial orbital decompression with resolution: report of a case. *Trans Am Ophthalmol* Soc 1975; 73:64–73.

subtraction. We had an extraordinarily good x-ray man at the Medical College who was able to pinpoint it for us.

Hughes: What do you mean by subtraction?

Guerry: This is an x-ray technique that we don't use any more. You don't have to because of all the modern techniques that we have available, such as magnetic resonance. In the subtraction technique, you would develop the x-rays in such a fashion that dense structures would be removed and the soft tissue structures would be left and pathology in this soft tissue could be studied. It was a technique that was very difficult to learn, and you had to be an expert to really read it. It was an extraordinarily good technique and the best thing that we had until we got all these new techniques.

Hughes: Had anybody previously thought to correlate choroidal detachments with AV shunts?

Guerry: I don't think that this was the first case, but it was amongst the first. Thank God there are not very many of them, because these things can really be disastrous. The main thing is, How do you treat them? Right now there are no real good ways of controlling them, but luckily most will either get well themselves or, if you do an arteriogram in an effort to demonstrate the shunt, not infrequently the doing of the arteriogram will effect a cure. We don't know why, but something happens at the time that you do the arteriogram, and a fair number of them seem to get well after that. Also, a fair number will get well spontaneously over a period of time, unlike the big shunts that you recognize by the bruit.

Hughes: What causes the fistulas?

Guerry: It's probably a weakness in the vessel wall. The most common cause of the big-type shunts with the bruits is probably trauma, usually as a result of automobile accidents. We see a fair number of people that have that. They're real tough customers.

Hughes: Why would you possibly confuse a choroidal detachment with melanoma?

Guerry: These detachments look a lot like melanoma to the uninitiated. If you're not a pretty good retinal man, you can very easily get confused. One of the extraordinary things about our case was that it was bilateral.

Hughes: That's unusual?

Guerry: That's very unusual.

Hughes: As I remember, this particular patient had been to several people before he came to you, and nobody had caught it.

Guerry: That's right.

Hughes: In this case, and I guess in most of them, the choroid spontaneously reattached?

Guerry: Exactly. When you bring the venous pressure to normal levels, nature takes over and they're cured.

Research

Funds

Hughes: Dr. Guerry, funding for the research you did, of course, is of utmost importance. Do you want to go through the sorts of funding that you had over time?

Guerry: Yes, funding is the lifeblood of any department because you just can't do good things without good money. So we were pretty lucky in that we were able to attract funds, and we were also lucky in that we were working with the very strong biophysics department of Bill Ham. For many years, Bill Ham's department was funded by the air force and the other armed forces. Then in later years, as I said, he was able to bring in funds from AT&T and Corning Glass and several other large corporations. So that part of the effort was well funded from the very beginning.

In the Department of Ophthalmology, the first grant that we really got was from the Knights Templar, who gave us $20,000 to buy a light coagulator. Then after that, we were able to get the Titmus Optical Company in Petersburg interested in our research, and they set up the Titmus Ophthalmic Foundation in our department and gave us regular funding for our laboratory work. This went on for a good many years. As a matter of fact, Titmus still gives the Department of Ophthalmology some money but not the amount that we had for some ten years when they were very active. That was the time when we were working with intraocular lenses.

Hughes: You could decide how to spend the money?

Guerry: Absolutely. They just gave us a certain sum of money. Each year we'd sit down and talk with them, and they'd tell us what they would allow us to have. They would contribute between $25,000 and $75,000 a year, which wasn't peanuts for a small institution like ours at that time.

Then Research to Prevent Blindness was always very good in giving us research funds. There were several corporations around town that every so often would kick in with money for a specific project that they might have some interest in. I can't think of one offhand, but I think the American Tobacco Company gave us a stipend at one time, but this was a one-shot thing. The community at large was very good to us; if we needed something, we could go to a private individual. Our first laser was given by a grateful patient, a lady who was interested in doing something for the department. The most munificent gift was a large sum that established the DuPont Guerry III Foundation. So we had a lot of happy patients who would kick in for an individual item. We were never too hungry, and we always had the money that we needed to do the things that we needed to do.

Of course, that kind of funding is peanuts if you've got a great big department, but we were never able to build our department up to that point. We had hoped to do that, but we were never able to bring a super eye department into being because we were never able to work out an affiliation with the eye hospital.

Breadth of Interests

Hughes: Your research is very eclectic. Do you have any comment to make about that?

Guerry: How do you mean?

Hughes: My impression is that nowadays, if one glanced at a prominent ophthalmologist's bibliography, there probably would be at most two or three areas in which he had done any concerted research. Your publications are on many different topics. How much of that diversity is due to your wide interests and how much to the era in which you grew up, where I'm speculating it might have been more possible to do research in different areas?

Guerry: I think you hit the nail on the head. I think it's a twofold thing. Personally, I was interested in a lot of different things and didn't specialize in any particular field. Also, the timing was great because there were so many fields that were wide open and that needed to be explored. You couldn't do that today. I don't think

it's feasible either from the standpoint of the funding or the place to do it.

It's interesting in this regard to reminisce a bit. At a medical meeting in Williamsburg, Dr. Ed [Edwin B.] Dunphy, professor of ophthalmology at Harvard, Jack Dunnington, and I were talking about various and sundry things. Suddenly Ed Dunphy turned to me and said, "DuPont, I'd like to ask you a personal question. How does a young fellow like you in a small institution such as MCV turn out the first-rate research that you do? You must realize that you're on the cutting edge of ophthalmology and the envy of all of us of the older generation." I thanked him profusely and told him that I had been blessed first by having excellent training and even more importantly by having bright, productive, and loyal people working with me.

Hughes: Are you aware of making a conscious decision not to specialize?

Guerry: No. If it had been just one particular thing that I had become entranced with, that would have been a different story, but I was interested in everything that came out, and not just in ophthalmology. It's just the nature of the beast.

Hughes: One of the comments that many people made when they were talking about you was precisely this, the breadth of your interests. Do you have any explanation for the breadth of your vision?

Guerry: No, I think it may be genetic. [laughter] I can't explain it any other way. Probably it would have been better if I had zeroed in on one particular thing and worked on that for a lifetime, but I think it would have bored me to tears. [laughs]

Hughes: You were blessed too, aside from sheer native ability, with a very solid and broad medical background, first in medical school and later followed by a complete residency in otolaryngology before you even got into ophthalmology.

Guerry: Also, as I told Ed Dunphy, I was blessed with wonderful people to work with. The people that worked with me in the laboratories were always bright people and honest and diligent and creative workers, and all of them made their mark in the ophthalmological world. That doesn't always happen, and I must say they were always loyal too.

Hughes: Looking back on the research collaborations over your career, was there any typical role that you played?

Guerry: I think there was. In my collaboration with Bill Ham and the Department of Biophysics, they needed somebody with my background to supply the information and the know-how for certain phases of that research. Conversely, our department and my own personal experience were magnified many, many times by our association with Bill Ham. I think both departments and individuals, had we not had this working relationship, would have been the less for it. It was a blessing for all concerned.

Hughes: Did you encourage your residents to do research?

Guerry: Absolutely. And most of them had at least one problem to work on.

Hughes: That was obligatory?

Guerry: We insisted that they do something. I got that from the eye institute [at Columbia]. They insisted that you do something. You might not publish it, but you were exposed to it, and what you did with it was up to you.

Hughes: Did your residents have to write up their research in some form?

Guerry: Yes. Most of them wrote something that could be published.

Use of Human Subjects

Hughes: The federal guidelines for the use of human subjects in medical research didn't come out until the 1960s.

Guerry: That's right. We didn't have to put up with that. The state of Virginia didn't tell us how we were going to do research on humans, but our own institutional code told us what we could do, what we couldn't do, and why we had to have permits signed, and that sort of thing.

Hughes: Was the institutional code comparable to the federal standards?

Guerry: Yes, it's pretty much the same sort of thing.

Hughes: So you didn't have to pay attention to the federal guidelines because you were already paying attention to the institutional code.

Guerry: That's exactly right. But we never did any human experiments without the express permission, and the knowledgeable

permission, of the patient. That code that our hospital and medical school came up with took all of that into account.

Hughes: Were you ever a subject of your own research?

Guerry: Where I was the experimental animal?

Hughes: Yes, a really experimental animal. [laughs]

Guerry: No, I never did that. I wouldn't have hesitated to if a situation had arisen where I felt I needed to do it. But I must say that I admire people who have done it and who have felt that they could do it no other way.

Hughes: Is there anything more you want to say about research?

Guerry: No, other than I think that it has been one of my most rewarding interests.

Hughes: You played many different roles in your career—researcher, administrator, surgeon, practitioner. Can you single out one as more important than the others?

Guerry: I really can't. As a matter of fact, I think it makes what I would call a wholeness to my life—a holistic medical-type thing. [laughter]

No, really, I don't think I would have ever been happy just doing one thing. I guess, because I did it most, you'd have to say that clinical practice was probably dearest to my heart, but not necessarily so, although I don't know what I would have done without my patients. My patients meant everything to me and I was always interested in them. But I don't think I'd ever have been happy just doing purely clinical medicine.

I was never the world's greatest administrator, I have to admit. A lot of people I know are better administrators than I am. I think of all the things that I did, administration was probably the lowest one on the totem pole, both from the standpoint of my interest and the results I got. On a scale of one to ten, I'd give myself an eight.

Publication

Hughes: How important did you consider publication?

Guerry: I think publication is very important for anybody doing research; if you don't publish, nobody ever knows what you've done. It's an absolute must for research people, and for clinicians too, because it's important that the work that you've done is disseminated. Certainly, if the work is important enough for you to do in the first place, if it's not disseminated it really doesn't serve a very useful purpose. So I think you've got to publish.

Hughes: Did you encourage members of your department to publish?

Guerry: I did. Many of my residents have done a lot of publishing. I don't know if it was necessarily me that encouraged them to do it, because most of them probably would have done it anyhow. But my encouragement certainly didn't hurt them any, and it may very well have helped.

Hughes: How did you decide where a paper should be published?

Guerry: Well, I sort of liked certain journals. I published my work in the *AJO* [*American Journal of Ophthalmology*], and I guess one of the reasons we did that was that I was on the editorial board for a long, long time, maybe twenty-five years. I knew the guys that ran the show, and I always liked their format. We published in other journals, but the *AJO* was always my favorite journal.

A lot of people wouldn't give their very best stuff when they presented a paper at the AOS because if you published it in the *Transactions* you couldn't publish it anywhere else. Finally, Frank Newell worked it out so that you could publish it in another journal; it didn't have to be the *AJO*, but he was happy to accept it. That turned out to be a great boon, and immediately the caliber of the papers at the AOS picked up. Everybody had figured, Who's going to read the *Transactions of the American Ophthalmological Society*? You publish something in that, it would stay buried for eternity.

Hughes: How long ago was that policy initiated?

Guerry: That was within the decade.

Translation of Thiel's Atlas, 1963

[Interview 6: April 13, 1990, the Guerry home outside Richmond, Virginia]

Hughes: How did you come to take on the translation of Rudolph Thiel's Atlas of Diseases of the Eye?*

Guerry: Professor Thiel's atlas, which was of course in his native tongue, German, was highly thought of on the continent, and he wanted to have an English edition. Wolfgang Lieb, who had trained under him, was working in my laboratory at that time. Professor Thiel knew that Wolfgang had come over here, and he knew about our Department of Ophthalmology at the Medical College because he had read some of our papers. He called Dr. Lieb and asked him if he would talk to me about the possibility of our translating his atlas into English. So I got on the phone and I told him that we would make it a department project and all of us would work on it. He said he thought that was ideal because then he'd have three people working on it, and he thought that three was a lot better than just one. Before we started the project, Wolfgang left and Walter Geeraets took his place on the team.

Thiel said he would send us all the material that he wanted translated, which he did. We set about that, and it took us about a year and a half, to get all this material together. Wiesinger would work on the translation for a while, and then Geeraets would work on it, and then I would take what they had translated and put it into American English. It was a very popular book and is still used.

Hughes: What else was there at that time?

Guerry: Vogt had three volumes of slit-lamp work—beautifully done but antiquated.** Troncoso's *Internal Diseases of the Eye and Atlas of Ophthalmoscopy**** was very good for its time, but it wasn't a definitive book in any sense of the word, as was Thiel's.

Hughes: Didn't Al Reese have an atlas as well?

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* Thiel R. *Atlas of Diseases of the Eye*. Amsterdam: Elsevier Publishing Co, 1963.

** Vogt A. *Lehrbuch und Atlas der Spaltlampenmikroskopie des Lebenden Auges*. Berlin: Julius Springer, 1930.

*** Philadelphia: FA Davis Co, 1946; 1950.

Guerry: Al Reese's book had to do with nothing but pathology. Thiel's was a universal book describing all kinds of diseases.

Hughes: So it was very comprehensive.

Guerry: Very comprehensive, and with superb pictures.

Hughes: Who had done the photography?

Guerry: The photographers that worked in his department. I never knew who they were. Some of his illustrations were by artists and these were also very good.

Hughes: Tell me a little about Thiel.

Guerry: Thiel was professor and head of the Department of Ophthalmology in Frankfurt. He was an internationally known ophthalmologist, and it was his atlas that really put him on the map. He was known because he went to all the international congresses and he was recognized as one of the top ophthalmologists in the world at that time.

Tour for the World Conference on the Cornea, 1963

Hughes: In 1963, you went on a lecture and conference tour for the International Eye Bank. Tell me, please, how that came about.

Guerry: This was a speaking tour that Dr. Harry King, who headed up the International Society of Ophthalmology, worked out. He called me one day and said that he needed somebody to do a world tour giving talks on various ophthalmic subjects, but in particular on corneal problems. I talked to Sally and she thought it was a great idea. So Harry and I sat down and worked out the details, and Sally and I made the trip.

We started out in Hawaii with the All-Hawaiian Congress of Ophthalmology, where I gave my first paper. We then went from Hawaii to Japan. I talked about corneal grafts at the All-Japanese Congress. This was a delightful experience. I would say at least two-thirds of the audience spoke English, but for the ones that didn't, we had a translator on the podium with me. As I wound up my presentation, I said how pleased I had been to meet all my Japanese friends; they had been so hospitable. I would like some day to be able to return this favor, and if any of them ever came to Richmond, Virginia, I would be very happy to receive them and show them around. For

about five years after, there was an entourage of Japanese ophthalmologists that came to Richmond, all of them delightful people, and they'd come and stay a day or so, and we would show them around. It was a very interesting experience.

From Japan, we flew to Taiwan, landing in Taipei. Before leaving on this junket, I had written Madame Chiang, giving her some details of our proposed trip. She asked us to get in touch with her when we arrived. We stayed at the Grand Hotel, a monstrous "gaudy but grande" edifice, painted in garish red and green colors and of typical Chinese architecture. It covered the top of a large hill.

After arriving, we first got in touch with our son DuPont IV, who was teaching for a year in the American School in Taiwan. This was a break between Yale and the University of Virginia Medical School. We then contacted Madame Chiang by phone, and in her lovely Georgia drawl she welcomed us very graciously and set up a visit the next evening at her summer palace. The General Chiang Kai-shek was out in the boonies inspecting some military facilities and would not be available. Early the next day, she sent her secretary, Ms. Pearl Chen, around to show us the sights of the city.

At the appointed time, Ms. Chen reappeared and she had us chauffeured over to the summer palace in a large black limousine. We were greeted just at dusk by a tall, handsome, uniformed young general who ushered us into a large parlor, well appointed but not elaborate, and had us take seats: Sally, young DuPont, and Bud and Alloyise Pomeroy (who were our traveling companions).

In about fifteen minutes, the general walked into the room and immediately following him was a large, well-mannered German shepherd dog on a leash, followed in turn by the beautiful, regal and stately Madame Chiang. She greeted us warmly in her melodic southern accent and made us feel at home. She talked at length about her remembrances of my grandfather and how much he had meant not only to her but her sisters as well.

She then told us she would like us to see her "favorite charity," an orphanage some three or four miles from the summer palace. Whereupon we were ushered into two limousines, while she rode in a third. Preceding and following the limousines was an armed security car in constant communication with the police by radio.

After about fifteen minutes, we arrived at her "favorite charity." And then the unbelievable happened. We were greeted by a large brass band flanked by orphanage attendants, which then

proceeded to play in loud and no uncertain terms the stirring song, "Marching Through Georgia." That sort of shook us Confederates up, but Bud Pomeroy, who is a Yankee but not a damn Yankee, enjoyed every note of it. Of course, we applauded, but not as vociferously as we would have, had it been "Dixie."

We then had a pleasant visit with some of the young orphans and were given some instructions on how to write Chinese symbols. Then we were returned to the Grand Hotel after a nice send-off by Madame Chiang. The day after that, her personal physician gave me a guided tour of the medical school where we had an ophthalmic seminar and I gave them a short corneal talk which was well received.

From Taiwan, we went to Bangkok. One of my residents, Dan Soomsawasdi, was assistant professor of ophthalmology at the medical school there. Oh, you wouldn't believe how glad he was to see us when he met us with his resident staff and several of his prize patients. Some other people also met us at the airport; John Oppenheimer, an old Richmond boy, was the colonel in charge of American Army personnel who were liaison to the Thai government. He met us with about four or five of his staff. I gave a talk at the medical school at the University of Bangkok, and Soomsawasdi introduced me.

From Bangkok, we went to Hong Kong, Singapore, Greece, Egypt, Rome, England, and then home. I gave talks in all of those places.

Hughes: All about the cornea?

Guerry: Not entirely. I had about four canned lectures for the tour.

Hughes: So this tour was laying the groundwork for the World Conference on the Cornea?

Guerry: Exactly. It was a mild propaganda tour to stir up interest in the corneal conference that Harry King was planning. They had a good turnout for the conference.

Hughes: Why were you designated to go?

Guerry: I had done a fair amount of corneal work, and I was a real good friend of Harry King. He needed somebody that could take that much time off. My practice at that time and my service down at the Medical College were all going along smoothly, and the situation was such that I could spend two months away.

Sir Stewart Duke-Elder

Hughes: Dr. Guerry, you told me a story off-tape about Duke-Elder, who was the major speaker at the centennial of the AOS [1964].

Guerry: When Maynard Wheeler was president.

Sally and I were in charge of the reception that night, and I was charged not only with seeing that it was done properly but also with taking care of Sir Stewart Duke-Elder. So prior to the banquet, Sir Stewart and I were chatting about various and sundry ophthalmological things, and he said, "By the way, DuPont, you know I have a speech to give tonight." I said, "I'm looking forward to it very much, Sir Stewart." He said, with his Scottish brogue, "Would ye do me a favor, lad?" I said, "Anything you want, Sir Stewart. What would you like to have?" He said, "Would ye be good enough to get a fifth of Ballantyne's and put it at me feet? I might like to have a wee nip during the procedures." I said, "Well, Sir Stewart, I think that's just fine. Consider it done." So I got a fifth and put it at Sir Stewart's feet. During the dinner, Sir Stewart nipped on it, and the time came for him to talk. He got up and made the most beautiful address that I have ever heard anybody give anywhere at anytime. Standing ovation.

Ophthalmology in Richmond

Hughes: Let's talk now about town-gown problems.

Guerry: Oh, my. As Vi Dabney said in his book on VCU, the Medical College had town-gown problems from the very beginning. Four doctors founded the institution as an arm of Hampden-Sydney, but they didn't locate it at Hampden-Sydney, which as you know is in Farmville. This being a country town, there wouldn't be enough clinical material. So they decided to build the medical school in Richmond, but they wanted a Hampden-Sydney College charter. So it became the medical division of Hampden-Sydney College. The Richmond citizens were not happy with a bunch of doctors at the medical school, so there was friction from the very beginning. If you were on the faculty, you might be suspect as far as the town people were concerned.

With all of this friction between the people who were at the Medical College and the ones in town, it was just natural that there would be a lot of partisanship and factions as far as the practice of medicine went. There were a lot of proprietary

hospitals established in the city of Richmond to take care of the populace. Every real strong medical man that came along would decide that he probably ought to have his own hospital, so he would found a hospital. As a consequence, we had more proprietary hospitals than anywhere in the country. The situation was almost unique. Certainly, I don't know of any other place in the country where they had that situation.

*Hughes: Dr. Barber told me that he thought that the town physicians were an exceptionally sharp lot and very diligent about attending grand rounds.**

Guerry: I think that that is absolutely true, in our department, particularly.

Hughes: Do you think you were partially responsible?

Guerry: Yes. But in the old days before I took over the department, there were no grand rounds. The teaching that was done in ophthalmology was purely and simply having the residents take a look at a patient and then the attending doctor would come over and check him. There were a few lectures but not much else.

Hughes: How would you rate ophthalmology in Richmond on the scale of conservative to liberal?

Guerry: Well, I would say that when I came to town, it was very conservative. I would say that now it's still probably more conservative than a lot of towns, but by and large, it's not nearly as conservative as it used to be.

Hughes: Why has it changed?

Guerry: I think that it's changed simply because everybody as far as medicine and everything else is concerned is just a little bit more liberal than they used to be. But Richmond is definitely more conservative than the average city or town in the United States, no question about that.

Hughes: Philadelphia has a reputation for being medically conservative. Where does Richmond fall?

Guerry: I would say that Richmond is probably a little more so than Philadelphia. I think you're probably right there—as compared with New York and Chicago, I think Philadelphia is a lot more conservative.

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* Barber interview, October 30, 1989.

Hughes: Did you ever have trouble balancing your clinical, surgical, teaching, and research responsibilities?

Guerry: Not really. As old Dr. Robert Bugg, headmaster at St. Christopher's Church School used to say, "I was able to po'tion my time." [laughter] At one given time, I might be doing a little bit more on the research side, and a little bit more at another time on the teaching side, and another time I'd be doing more on clinical research and practice. So I kept it pretty well balanced, and the momentum would shift now and then.

Hughes: How did you set your fees?

Guerry: Recently, I had occasion to look at some of my charges for the first few months when I was in practice in 1944, and it was unbelievable how low they were. For an office visit, I would get $10, and for a return visit, $2, and for cataracts, $150. Squint surgery, depending on the number of muscles I did, I'd get somewhere between $75 and $100. Retinal detachment was $175. Corneal graft was the big one; I got $200 for that.

Hughes: Did those rates reflect community rates?

Guerry: Yes. As a matter of fact, since I had trained in New York, they were probably a little higher than the going rate, not much, but just enough to sort of whet your appetite. [laughter]

Hughes: Were there any types of patients, other than the clinical patients, that you routinely did not charge?

Guerry: Absolutely. There was a regular list of the ones we didn't charge. We didn't charge preachers. We didn't charge other doctors or widows of doctors or members of a doctor's family. We didn't charge medical students. We didn't charge people who couldn't pay. We just wouldn't think of charging those people. We felt that we'd be breaking the Hippocratic oath if we did this sort of thing. Surely different from today.

Hughes: Did most ophthalmologists in this area have a similar philosophy?

Guerry: They did, and not just the ophthalmologists, but the medical community at large. All of them abided by these tenets.

Retirement

Hughes: Any comments about your feelings when you relinquished the chairmanship in 1973?

Guerry: I did it with no reluctance and with no regrets. I figured that I had done what I set out to do, and I had accomplished most of my goals. I felt that I was leaving the department better off by far than when I came in, and I felt the department was going to continue to recruit good people. For the time being, until somebody could be recruited in a full-time capacity, Geeraets was perfectly capable of carrying on with the other members of the department.

So I was really, you might say, relieved. There were a lot of things, particularly the administrative part, that I'd never been real excited about, and I was delighted to get away from that. I could still continue to do any research that I wanted to. My practice had gotten to the point where I would have had to neglect other responsibilities if I'd kept it, and I was enjoying my private practice. Also, my fees had gotten to the point where I could start saving some money for my old age. The time that I would have put in teaching and research, I now put in practice and in putting away something more than just for a rainy day. But I continued to do some teaching and research.

Hughes: When did you retire from practice?

Guerry: I retired at the end of June of 1988.

Hughes: What led to that decision?

Guerry: I probably would have practiced for another couple of years had it not been for the problems that I was having with federal encroachment on the practice of medicine, particularly having to do with how we were to be remunerated. It was perfectly obvious that this was going to get progressively worse. It just seemed to me that it wasn't worth the effort.

Also, the practice of medicine, which had been almost a religion with us older doctors, was getting to be a trade instead of a learned discipline. It's getting more like that all the time, and if you're not a real good businessman now, you're not going to survive in medicine. So much of what used to go into the practice of a learned discipline now has dropped to where you're administrating a business. So much of medicine goes by business ethics rather than medical ethics.

Hughes: And you didn't like that.

Guerry: That's not my dish of tea. I didn't go into medicine for that in the first place, and I didn't see any reason for me to have to do it. If I'd had to practice in order to survive, I probably would have stayed, but I would have done it reluctantly. I was ready to quit, and I quit at the right time; I did all the things I wanted to do and did them the way I wanted to and at a time that was propitious as far as medicine goes. It ain't the same ball game. If I had to do it over today, I don't know whether I would go into medicine. I probably would, but I wouldn't be nearly as sanguine about going into it now as I was in the days of yore.

Hughes: You have four children who are physicians. Do you have any fears for their future?

Guerry: I've got four children and one in-law in medicine.* [laughs]

Hughes: That's right. [laughter]

Guerry: Yes, but they live in a different world. Each age is unto itself, and they don't seem to be bothered about the things that I was bothered about in the old days. They are just as pleased to be practicing medicine as I was.

* DuPont Guerry IV is professor of hematology and oncology and lives in Pennsylvania; Richard Kennon Guerry is an ophthalmologist in private practice in Richmond; Mary Guerry Tucker completed an ophthalmology residency at MCV in the summer of 1990 and now is in private practice in Richmond; Mary's husband, Henry St. George Tucker III, is a hematologist and oncologist in private practice in Richmond; Thomas LeGrand Guerry is an otolaryngologist with Kaiser Permanente in Santa Rosa, California.

III. MEMBERSHIPS, HONORS, AND MISCELLANEOUS TOPICS

The American Academy of Ophthalmology

Vice-President of the Academy, 1981

Hughes: Dr. Guerry, you were vice-president of the Academy in 1981. Can you think of any outstanding issues during that year?

Guerry: One of the problems that we were having at that time had to do with litigation in regard to radial keratotomy. In its great wisdom, the Academy made an effort to protect the public from something that it felt might not be necessarily all bad but that certainly hadn't been perfected as a procedure. The studies of radial keratotomy were felt to be inadequate and not properly controlled, and the Academy had gone on record as not favoring this procedure until such studies had been carried out that would indicate that this was a good and safe procedure.

In any event, the Academy went on record endorsing the opinion of the National Advisory Eye Council that radial keratotomy shouldn't be carried out until a controlled study showed its safety and efficacy. The people who were doing the operation felt that their rights were being trampled on. Before the end of my term, the Academy and several officers of the Academy actually were sued.

Hughes: Including you?

Guerry: Well, it turned out that's the way the original suit was entered.

The year that I was vice-president, the suit occupied a lot of Bruce Spivey's, the president's, and the board's time. It had everybody worried because if the case had gone the wrong way, the Academy would have been devastated financially. By and large, being vice-president was a thoroughly enjoyable experience. There's not a finer group of people anywhere than in the Academy hierarchy. They're some of our most knowledgeable people. The job that they have done in bringing the Academy to its pinnacle is one of ophthalmology's greatest stories.

I don't know of any other discipline that has an institution that is superior or even equal to our Academy. It takes education from the relatively competent level where a resident finds himself when he finishes his residency to the high levels of competency attained in postgraduate studies. If it weren't for the Academy, I don't know what would have happened to continuing ophthalmic education in this country, because it has furthered all the good and proper things in ophthalmology to a degree not imaginable twenty years ago.

Hughes: What is your feeling about the Academy's increasing role in politics?

Guerry: I think it's a must. Somebody's got to protect our rights. The discipline of ophthalmology, like all of medicine, is becoming more and more a pawn of the federal government, in particular, and of the state and local governments as well. That's politics. And if you don't have somebody to fight your battles for you, you're going to have to do it yourself. I think that if there is going to be any real, good, solid continuum of medicine as we know it, it's going to be because of the efforts of the Academy and such organizations. They've done a superb job so far.

I must say in all honesty that I've been disappointed in the American Medical Association, which I don't think has really done right by its doctors. I hate to say it, but I think the hierarchy that runs the American Medical Association is just not comparable in competence or tenets to the people that we have running the Academy.

Hughes: The AMA might argue that it has lost power because of the growth of specialty organizations such as the Academy.

Guerry: I'm sure it would, but the reason for this growth is that the AMA was so inefficient. If the AMA had done what it should have done for all its members, the Academy would not have had anything to do with politics.

Hughes: What happened? When you entered medicine, the AMA was the almighty power in American medicine.

Guerry: Absolutely. The three organizations that ruled ophthalmology were the Section on Ophthalmology of the AMA, the AOS, and the American Academy of Ophthalmology. Well, the AMA section now is nonexistent. There's an AMA section paper, and that's all, and this provides an honorarium from the Knapp Fund.

Hughes: Getting back to the Academy, what were your responsibilities as vice-president?

Guerry: About the responsibilities you would expect of a vice-president. [laughter] I would serve if the president was incapacitated, and I was put in charge of a few committees. The main thing was to go to the meetings and be available for any task that the president wanted me to do. The president ran the show. When I say the president ran the show, the president ran the show under the auspices of Bruce Spivey. But the real power in the Academy is the executive vice-president, Bruce Spivey, and bless his soul, he has certainly done a whale of a job. He's Mr. Academy. No question about it.

While I was a vice-president of the Academy, a delightful young lady, Lucy Negus, director of development and community relations at Westminster Canterbury House, a continuing care facility in Richmond, came up with an innovative idea. She had seen many of the retirees helped by a low visual aid device provided by an ophthalmologist. She spoke to my wife, Sally, about this and asked her what she thought of having a large print book fair. Sally thought it was a splendid concept and so did I. Lucy asked us to be the honorary chairs and liaisons for the ophthalmic community.

The large print book fair was held at Westminster Canterbury and was a roaring success; so much so that I brought it to the attention of the board of the Academy. The board was intrigued, and Lucy Negus, her staff, and Sally and I got the program off the ground. It turned out to be a real boon not only for the poorly sighted but also for the Academy. Even today a manual is available from the Academy if you wish to have a fair!

An Independent Academy

Hughes: Were you directly involved in the decision to split the Academy into two specialty groups?

Guerry: I was interested in it but didn't actually get up and make any speeches, but I did buttonhole a lot of people. I didn't have to do much buttonholing because I'd say ninety-five percent of our membership felt that this was the way to go. As president [1966–1967] of the Virginia Society of Ophthalmology and Otolaryngology, I had predicted this when we split our state society into two sections in 1966. We knew that this was going to happen on a national scale, as our society had already gotten too unwieldy at the state level. Can you imagine what it would be like now if the two academies met together? In New Orleans at a recent meeting of the Academy, we had something like 25,000 people. There's no way we could have added 18,000 more ENT people.

Hughes: There is probably not a facility that could accommodate that many.

Guerry: Not even that big coliseum in New Orleans could. So the split was a natural whose time had come. There were a few diehards, but you always find those.

Hughes: Were there any problems involved in splitting the Academy?

Guerry: I'm sure there were. But I think that it went a lot more smoothly than anybody ever anticipated.

Hughes: Anything more about the Academy?

Guerry: It's a great organization and it certainly has done a superb job. It's the envy of the international community. The Academy meeting has more foreign dignitaries and other foreigners that come to be educated than any other ophthalmic organization in the world. There's nothing comparable. All my international friends look forward to the Academy meeting because it is a fountain of learning. The Academy is beginning to have a real international flavor.

Hughes: I understand that American ophthalmologists consider attendance at the Academy annual meeting the thing to do, if you can possibly afford to leave your practice.

Guerry: It's a must if you want to keep up. We sent our senior resident to the Academy every year and paid his expenses. We even got to the point where we were sending our junior residents too. We just left one resident in the department to run the show and keep the home fires burning.

Hughes: How widespread is that practice amongst departments of ophthalmology?

Guerry: I think it is pretty widespread and getting more so all the time.

Member, American Board of Ophthalmology, 1970–1978

Members and Functions

[Interview 7: April 14, 1990, the Guerry home outside Richmond, Virginia]

Hughes: Dr. Guerry, you were a member of the American Board of Ophthalmology from 1970 to 1978. Who appointed you, and why?

Guerry: I was a representative of the AOS. As you may remember, the board members came from three sources. One was the AOS, the other was the eye section of the AMA, and the other was the Academy. When I came on board in 1970, Francis Adler was the secretary of the board, and the president was Dave Harrington. The president each year was elected by the board itself and as a rule served just one year.

Hughes: Why would one person be chosen over another? Was there any protocol?

Guerry: There wasn't any particular reason, except that one man would seem ideal for the job. Sometimes it had to do with an individual's prestige, and sometimes with the amount of work an individual had done for the board. The truth of the matter is that the board was run and is run by the secretary. Besides being a well-versed and universally admired ophthalmologist, Francis Adler was an administrator par excellence. When he retired, Bob Shaffer became secretary, and after him, Bill Spencer. Both were chips off the Adler block.

Bob was a natural for this job. Besides being the number one glaucoma man in this country and probably internationally, he was a superb administrator, communicator, educator, and withal a superior human being. As an added fillip, he had been well groomed by Dr. Adler for some several years. Under Bob's administration, the board prospered, almost doubling in size and achieving constant streamlining of the exam.

Hughes: Does the board tend to reflect the secretary's views?

Guerry: Not necessarily. The secretary might really be at odds with the membership about some issue. But when the board makes a decision, it's usually by a large majority.

Hughes: What sorts of policy were you making?

Guerry: The board was interested primarily in seeing that able ophthalmologists were turned out in this country and that they adhered to certain very strict rules concerning ethics and proper training. The board was founded to protect the American public by certifying that these ophthalmologists were good people trained to treat properly and to practice ethically. Until the board was founded in 1916, ophthalmologists and the nose and throat people (for the most part) practiced eye as well as ear, nose, and throat. In that year, the specialties began to separate. Our board came first, and then some several years later, it was followed by a board for ENT [1924], and then some several years after that, ob-gyn [1930].* So our board set the example for boards in this country.

Hughes: Who else was on the board when you first became a member?

Guerry: [consults document] The active board members were Bernie Becker, Fred Blodi, Goodwin Breinin, Bob Burns, David Harrington, Bob Hollenhorst, Bill Hughes, Irving Leopold, Ed Norton, David Shoch, and Joe Wadsworth. And the board always had consultants. You could serve a term as a consultant for four years after you'd been on the board. Our consultants at that time were Phin Calhoun, Leonard Christensen, Gerry DeVoe, Ed Maumenee, Frank Newell, Bob Shaffer, and Fred Wilson.

One of the most interesting people having to do with the board was Dr. Adler's wife, Emily Anne—E.A. to all of us—and her two sidekicks Mary and Rita Ladden.

Hughes: How were they helping the board?

Guerry: Francis Adler made policy, and these ladies implemented it. Without this staff, which was a very dedicated, highly intelligent, well-motivated group, there would have been no board. They really saw that the board ran with spit and polish.

Hughes: Was Francis Adler's wife a paid employee?

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* Cordes FC, Rucker CW. History of the American Board of Ophthalmology. *Am J Ophthalmol* 1962; 53:243–264.

Guerry: Yes, she was a paid employee, and so were the two Ladden girls. E.A. is no longer with the board, but Mary and Rita are and they continue to run the board with the same wonderful élan. And then there was another girl who was part-time. The office was in Philadelphia and for a while it was actually in Francis and E.A.'s home. About '75 it moved to an office building in Bala Cynwyd, a suburb of Philadelphia, where it is still located.

Hughes: How were the consultants used?

Guerry: The consultants had no vote but were used particularly at the time of examinations. We had so many candidates that the board members themselves were inadequate for the task. That was the consultants' *raison d'être*.

Hughes: The examiners were restricted to the members of the board and the consultants?

Guerry: No. Most of the examining was done by the associate examiners working under supervision of board members or consultants. An approved list of associate examiners was kept current, and these examiners were the backbone of the examining process.

Hughes: You were chairman in 1978. What were your responsibilities?

Guerry: My responsibilities were to do what Dr. Adler told me to do. [laughter] Really, it was run beautifully by Dr. Adler and by his charming wife, E.A. They told us exactly what we were supposed to do. We were to preside over the board meetings and if there was a matter of policy, Dr. Adler would always consult with the president. By and large, Dr. Adler and the president really pretty well made the ad hoc decisions.

Recertification

Hughes: Were there any major decisions to be made in those years you were on the board?

Guerry: Yes, we had a lot of decisions to make at that time.

One of the problems that was ever with us while I was a member of the board had to do with recertification. This reared its head year in and year out. There were several people on the board that were very, very strong for recertification. But at that time, most of the members felt that the time had not come for recertification, and so it was tabled.

Hughes: Why was recertification tabled?

Guerry: They didn't think that its time had come. Also, this issue was on the agenda at one of the Academy meetings. The Academy board met and discussed this issue, and later, the membership was asked to discuss it. A very well organized and vociferous group got up and stated in no uncertain terms that they didn't think this was in the cards and we ought to be thinking about more important things than recertification. It was voted on at that time, and recertification lost by a large majority. It was allowed to stay in limbo.

As I remember, Brad Straatsma was very much interested in recertification. He drew up what we thought might be a workable scheme, but when it was brought before the membership it was tabled. Since that time, they have talked about it, but it's never really come out in a form that the membership could swallow. It's still being discussed, and there is a movement afoot right now to put some form of recertification into play.

Hughes: What are the main arguments pro and con?

Guerry: The most compelling reason for recertification is to keep people on their toes. If you don't require recertification, some ophthalmologists may well decide that they never have to do any continuing education once certified. Recertification is certainly one way of keeping people on their toes. But a large part of the membership feels that once you're certified, you ought not to have to do anything further in an organized, rigidly defined program. I think there should be a happy medium and some sort of compromise where recertification of some sort comes in, enough to keep members honest. But it should be on the basis of credit for attending meetings with continuing education programs.

Hughes: Without a formal exam?

Guerry: I don't think you should have to take one.

Hughes: As a representative of the AOS on the board, were you supposed to be reflecting the views of the AOS membership?

Guerry: That was the original intent. Every year at the meeting of the AOS, the senior representative to the board for the AOS would brief the membership, the president, and secretary of the AOS about any problems that they felt should be brought to the attention of the American Board of Ophthalmology. The same was true of those who represented the Academy and the ophthalmology section of the AMA.

The AOS doesn't elect board members exactly the same way now because there's no longer a section of the AMA. New members of the board are chosen by the board itself after a nominating committee of the board has selected a candidate from the list of associate examiners. Nominees are those who have worked industriously and who have shown outstanding examining skills. As a courtesy, a letter is sent to the AOS and to the Academy summarizing board actions. This action will probably be stopped in the near future, as the AOS and the Academy are really not interested, since they no longer play a role in selecting the new members.

Hughes: What is the membership now?

Guerry: I think the board is twenty now. When they increased the membership of the board, they didn't do it all at once. They increased it four at a time until they got up to its present level.

Hughes: Why was it thought desirable to increase the membership?

Guerry: You needed the increase because the number of candidates was constantly increasing, and also they were trying to cut down on the length of the oral examinations. It was felt that they needed more people to man this effort if the overall examination time was to be shortened and since there were no longer consultants. Bob Burns and I were the last two consultants, dubbed "the dinosaurs."

The Examining Process

Hughes: Tell me about the examining process.

Guerry: The written examination was held in designated cities and consisted of an exam with a certain number of pertinent questions that would last the better part of a day. The questions covered all the different subdisciplines in ophthalmology. At the time that I was on the board, the oral examinations were held over a period of three days.

Immediately after the exams, the whole board would sit down and discuss the candidates in depth, especially the ones who failed or were conditioned. In some instances, after great discussion, a candidate's grade would be raised, resulting in a passing grade. One of the things that we always had to take up was what sort of insurance protection the board would have for fear of suits from candidates who thought they hadn't had a square deal. So we always had to keep the board insured.

Hughes: Has the board indeed been sued?

Guerry: To my knowledge, the board has never been sued. There've been threats, but it certainly was not sued while I was on the board.

Hughes: On what basis did you decide whether to pass or fail a candidate?

Guerry: The board bent over backwards to give a candidate a fair exam. The written exam is an open-and-shut case because anybody that got over seventy would pass. But in the oral, a lot had to do with the examiner's opinion. In those days, each board member would have three associates working under him. These were well-trained ophthalmologists who received no remuneration. We kept a list of people that were available from different parts of the country.

Three associate examiners would actually do the examining. When one of them felt that he had finished examining the candidate, he would notify the board member that he was working under. The board member would come in and ask how things were going, and the examiner would let the board member know. If the candidate had done well, it was incumbent on the board member to ask a few questions just so the candidate wouldn't feel neglected. When the board member came in to see how things were progressing, there would be some subtle signal, decided on before the exam began, which would let the examiner know what the candidate's status was. If the signal was positive, the examiner would ask the candidate a couple of questions, and then the candidate's card would be signed and he would be sent on his way.

On the other hand, if the signal was negative, the board member would have a go at the candidate until it was certain that the candidate really couldn't hack it and would be failed. If the exam was equivocal, the board member would say, "I think we'd better get one of the other members of the board to have a little session with you." The reason was that we felt we ought to give the candidate every chance in the world to demonstrate his proficiency, or that there might have been some personal antagonism, or that this particular examiner might have frightened the candidate. Under these circumstances, one of the other examiners would take a little time from his group and chat with the candidate.

Hughes: The examiners, regardless of their own subspecialty, could ask questions in any field?

Guerry: Any field in ophthalmology.

Hughes: What percentage failed?

Guerry: I would say probably as high as twenty to twenty-five percent would condition one or two subjects, or maybe fail one subject, not the whole exam. But the actual number that just flat out failed in the writtens was probably around eight to ten percent.

Hughes: If you failed the written—

Guerry: You were not allowed to take the oral until the written had been passed satisfactorily.

Hughes: I would think it would sometimes happen that a person would do very well on the written and not so well on the oral, or vice versa.

Guerry: This is very true. Unfortunately, some of the people could take a written exam and just go to pieces in the oral. But if they passed the written with flying colors and there was some question about them on the oral, they were examined by enough people to be certain that their difficulties weren't simply due to shaking in their boots.

Hughes: You feel confident that the great majority of people who passed the exams—

Guerry: —were competent to do good, solid ophthalmology. And we felt that was the board's mission.

Hughes: What manner did you take when you were examining?

Guerry: What I particularly tried to do, and I think this was the general feeling of most of us who were doing the exam, was to put the candidate at ease. Unfortunately, every once in a while there would be an examiner who really took the opposite route. Route's a pretty good name for it, because it frequently led to a rout of the candidate. When that happened, as a rule, the candidate would have to be seen by somebody else, and they would realize that there was some antagonism between the examiner and the examinee and would work out some sort of rapprochement. If the candidate really had just been frightened to death by this perceived ogre of an examiner, whether it was real or imagined, the next examiner would try to put him at ease, and frequently the candidate would settle down and do quite well.

Occasionally, there was an examiner who was extra strict, and his failure rate was higher than that of others. There wasn't much you could do about that. We had all these safeguards in

place which were utilized to the best of our ability. I'll say, I think the board did a superb job.

Hughes: Did you enjoy examining?

Guerry: I really enjoyed it, and I think for the most part, the candidates enjoyed it. One of the worst things you could do for one of the real bright candidates was to examine them in a desultory fashion, because they wanted to flaunt their knowledge and let you know that, by golly, they knew about as much or more than you did. When you got one of those candidates it was just a pleasure. It was almost like "dueling."

Hughes: Is there anything more that you care to say about the boards?

Guerry: I'd like to say that the ABO—and the other boards as well—have been one of the greatest boons to American medicine that I know of, and certainly to the public at large. If it had not been for the boards, not just for ophthalmology but for all of the other medical disciplines, Lord knows what would have happened to the public. You have enough problems as it is, but if you had the additional problem of turning loose a bunch of incompetents on the public, there's just no telling what would have happened. Here, the American Board of Ophthalmology was the leader. It might have been many years down the road before the public would have been protected, had not ophthalmologists "started the eyeball rolling" in 1916. So I think we ought to be self-congratulatory.

The American Ophthalmological Society

Officers

Hughes: You were council chairman of the AOS in 1979 and president in 1984–1985. Perhaps we could begin by discussing what the responsibilities of the council chairman are.

Guerry: The AOS has a secretary-treasurer that really takes care of the everyday, mundane mechanics of running the organization: sending out programs, collecting dues, and seeing that the meetings are set up properly, and that they're set up a good many years ahead so that we have a place to meet.

The council really runs the show, and the chairman presides over the council. At the time of the annual meeting, the senior member of the council (as chairman) presides, and the secretary-treasurer tells us what problems need to be brought

up and discussed. The members of the council, after proper discussion, vote on the various and sundry issues.

Hughes: How does one become president?

Guerry: There are two routes to becoming a president. You have to go through various steps, though, before a given route is taken. In order to become eligible, a possible candidate must be appointed to any one of several committees. If he does a good job, he can then be appointed by the president to the council, and after that he is in line for the presidency.

The other route is to become secretary-treasurer or editor. When you retire, you are eligible for the presidency and do not have to become a member of the council. As a result of a secretary-treasurer becoming president, the orderly succession of council members is broken and, therefore, an occasional ex-council member may not become president. It's a long, long process. You don't just come in one day and get elected president the next.

As I have already said, you don't always get to be president even if you go through the council. But if you go through the secretary-treasurer route, you always get to be president. The secretary-treasurer is nominated by the council. Because the secretary-treasurer eventually becomes president if he lives, one member who passes through the council will never be president, but the secretary-treasurer route is a sure thing. It doesn't happen but once every blue moon, but the blue moon comes around every so often.

Hughes: Were there any particular issues the year you were president?

Guerry: The year that I was president we didn't have anything, thank goodness, that was of particular moment.

Hughes: Please tell me about some of the appointments that the president is able to make.

Guerry: Those are as follows: one, he appoints a new council member to take the place of the last one that rotates off after his five-year term; and two, he appoints the chairman of the program committee. This doesn't change every year, but after an individual has been program chairman for several years it gets a bit onerous, and when that time comes, the president will appoint a new chairman. Three, he appoints a member of the Howe Medal committee; and four, most important of all, he appoints a member of the thesis committee.

Thesis Committee

Guerry: The thesis committee, composed of three men with one rotating off each year, is probably the most powerful committee in the organization because a man may be put up as a candidate for membership in the AOS, but if he doesn't write a satisfactory thesis, he never gets in. Now, there are a lot of other organizations that require a thesis, but in most cases it is not absolutely necessary for membership. The life of the organization is really dependent on having new and younger members all the time. The complexion of the thesis committee has a lot to do with the complexion of the membership.

In years gone by, the greatest part of the membership were clinicians. They were wonderful clinicians, the best in ophthalmology. It was the pinnacle in ophthalmology to become a member of the AOS. Then as time passed, researchers and academicians and department heads began to predominate, and the emphasis was put not necessarily on the practicing physician but rather on the researcher and the academician.

Hughes: Which in turn reflected the composition of the thesis committee?

Guerry: Exactly. The thesis committee controlled membership composition by recognizing for the most part the theses that had research or academic overtones. It's really sort of a shame because it seems as though the thesis committee is now really weighted in the direction of pure academia, particularly basic research academia. The practicing ophthalmologist, unless he spends research time in the laboratory, gets short shrift.

Hughes: Is there dissension among the membership?

Guerry: Well, I wouldn't say that there's actually dissension, but I think that nearly everybody recognizes that maybe the pendulum has swung too far in one direction, and as pendulums have a way of doing, it's beginning to swing back in the direction where more of just good, solid ophthalmologists who are not purely academicians or pure researchers will be the third leg of a three-legged stool. Now it's pretty much a two-legged stool—research and teaching—and two-legged stools are notoriously unstable.

I don't mean to castigate the society for the bent that it's taken because of the composition of the thesis committee, but I do think that a lot of extraordinarily good ophthalmologists are being left out because their theses don't come up to the standards that the committee thinks are necessary, when they probably do come up

to the standards that are adequate for admission. We don't want to be an esoteric society. We already have societies of that sort.

Hughes: What else would you like to say about the AOS?

Guerry: It has been pretty well recognized internationally as one of the most prestigious ophthalmological societies, if not the most prestigious, in the world. I'm sure there are other ophthalmic societies that are prestigious, but if you just had to pick one, and if you asked most anybody anywhere, they'd pick the American Ophthalmological Society. That was certainly true some several years ago, and I think it still holds today.

Hughes: Have you come across the sentiment that the AOS is an old boys' club?

Guerry: Oh, yes. I think everybody's said that from time immemorial. And it is, to a certain extent. It's an old boys' club in that after you get in there, you love all the old boys. [laughter] But I don't think it's an old boys' club before you get in.

Hughes: Is there as much interest among the younger generation of ophthalmologists in joining the AOS as there was in your day?

Guerry: No, unfortunately, and I think the great reason is that most of them don't feel it's worth the effort to write a thesis that could easily be turned down by the thesis committee. I've talked to a lot of real bright people that are wonderful candidates for American Ophthalmological. They say, "Why should I spend three years writing a thesis and have it turned down?" So this is getting to be a serious problem because there's a tremendous amount of talent that's being turned down.

Hughes: Or not even presenting itself.

Guerry: Exactly. I think that the society realizes it's got a problem and that it's gone overboard in the direction of academia, and there's going to have to be some changes made.

The Virginia Society of Ophthalmology and Otolaryngology

Hughes: Would you tell me the history of the Virginia Society of Ophthalmology and Otolaryngology?

Guerry: The Virginia Society of Ophthalmology and Otolaryngology was started in the early part of the century. Those were the days when there was a combined specialty of ophthalmology and otolaryngology, and a high percentage of the people in the field practiced the two specialties. Of plain-out, everyday otolaryngologists or flat-out ophthalmologists, there were very few. However, in the teaching institutions, as a rule, the professor was an ophthalmologist or otolaryngologist.

Hughes: Were otolaryngology and ophthalmology generally practiced together because it was difficult for an individual to support himself on only one specialty?

Guerry: I think that was true to a certain extent, but the biggest thing was that you didn't have to have a deep knowledge of either specialty for the simple reason there wasn't much to learn in either one, and just the eye or just the nose and throat really didn't seem to be enough to keep you occupied. As the fields began to develop, and with research, it got to the point where to be a real, good ophthalmologist or otolaryngologist, you couldn't really practice the two. That's when it was recognized that there ought to be a divorce between these two, a pleasant divorce. Some of the older fellows kept practicing both specialties until the end of their professional lives. But the majority switched over and went either one way or the other.

Hughes: What was the rationale for combining those particular specialties?

Guerry: Probably because they're so close to each other anatomically. I think that there were some very good men that did double ENT. What happened is, if you practiced double ENT, you took a liking to one of the disciplines a little bit more than the other. Even back in the old days, you might take out tonsils, but you preferred the ophthalmic part of it, and so you would really head in that direction.

Hughes: This discussion is relevant to the Virginia Society of Ophthalmology and Otolaryngology because did it not split in two?

Guerry: Well, it was during my tenure as president [1966–1967] that this happened. There'd been a feeling in the society that it was getting a bit unwieldy. The big reason it was unwieldy was there were so many people that felt that it ought to be either the one specialty or the other and that the simplest thing to do would be to divide up along the lines of the disciplines. It had gotten to that point because, as I said, there were only a few people practicing the two specialties at that time. The otolaryngologists

wouldn't sit through the eye papers, and the ophthalmologists wouldn't sit through the nose and throat papers. There's a time for everything as they say, and the time had come, so we divided the society.

Hughes: People were pretty much of a mind that the division should occur?

Guerry: I don't think there were any dissenting votes. Incidentally, we split up several years before the Academy did.

Hughes: Is there anything else you'd care to say about the year that you were president?

Guerry: That was the only real interesting thing that I was involved with at that time. But I'd like to say a word for that society: I think it does a very good, solid job. We have very good postgraduate educational programs every year. It's recognized as one of the better state societies.

Member, Editorial Board, *American Journal of Ophthalmology*, 1965–1981

Hughes: You were a member of the editorial board of the American Journal of Ophthalmology. *How did that appointment occur?*

Guerry: That was at the sufferance of the editor. I was appointed for several reasons: Frank Newell was a real good friend of mine; I was chairman of our department at the Medical College; I was a member of the AOS; and the editor was interested in getting as many good papers for his journal as he could. One of the ways to do that is to have assistant editors who have ways and means of directing papers in the direction of a given periodical. This has been the philosophy of the *AJO*, as well as other periodicals for years. They appoint good men who are doing things in the field, and as a consequence, they attract good papers.

I was very active at that time, so Frank was good enough to ask me to serve on the board. There really wasn't anything back-breaking that you had to do as an assistant editor. He would call on you to review articles for him. If they were accepted, there would be some editing and we would help with this.

Hughes: What were the criteria for acceptance of a paper?

Guerry: Well, there were several criteria. The main one had to do with whether the paper was pertinent or interesting to our readership. If it was something way out, the *AJO* wasn't interested in publishing it. It had to have merit and, for the most part, had to be current. By and large, we were interested in papers that had to do with basic and clinical research, as well as current clinical material, that were written well and appealing to the readership. For a long time, as I mentioned, if you published an article in the *Transactions of the American Ophthalmological Society*, you couldn't publish it anywhere else.

Frank Newell persuaded the AOS to allow republication of papers presented at AOS in other journals. By and large, the *AJO* and the *Archives* were the journals interested in those papers.

Hughes: Was there a rivalry between the AJO *and the* Archives*?*

Guerry: Oh, I think there always has been some friendly rivalry. At one time probably the *Archives* would be a little ahead of the *AJO*, and then the *AJO* would be a little ahead of the *Archives*. But both of them have been super periodicals.

Hughes: Is there any particular type of paper that would be likely to appear in one rather than the other?

Guerry: I think both of them have a proper mix of research, clinical, and historic papers. They're pretty much along the same lines. We published most of our papers in the *AJO*, and we were quite happy publishing there.

Hughes: Do you think that the AJO *reflected the outlook of the chief editor?*

Guerry: To a certain extent. I don't think you can have a periodical without reflecting considerably what the editor's tenets are. Frank Newell didn't really foist his beliefs on you, but I think his personality is reflected in the journal. Since he's a superior individual, you have a superior periodical. I don't mean to denigrate the great editors that we've had at the *Archives*; they've also been great. I think all of the American periodicals have served the national and the international ophthalmic community well. It's extraordinary how much they are respected internationally. No question in my mind that the American periodicals have been in the forefront for many years.

Hughes: Anything else about those years on the editorial board?

Guerry: No, I can't think of anything, except to say my relationships with the *AJO* have always been real fruitful, interesting, and pleasant,

and I've been most appreciative that they were good enough to ask me to serve.

Member, Knapp Fund Committee, 1972–present

Hughes: The Knapp Fund Committee is the next topic.

Guerry: The Knapp Fund was started when the Section on Ophthalmology of the AMA was very much in vogue. It was to honor Dr. Arnold Knapp and also to a certain extent his father, Hermann, for the great work that the Knapps had done in this country for ophthalmology. People were asked to contribute, and this fund was to be used for any good ophthalmic purpose that served to further ophthalmological education and research. The fund was to be collected and invested, and then the returns from it were to be given for these endeavors.

Parker Heath, Trigve Gunderson, and Francis Adler ran this fund. Parker Heath was the secretary and treasurer. He wanted to retire from the board, and neither Gunderson nor Adler wanted the job. There was a considerable amount of money that had accrued, and this account needed to be managed.

One night, Parker called Joe Wadsworth, then chairman of the eye department at Duke, and told him that he was ready to retire, that he wanted the Knapp Fund to be continued, and that he had picked him to take his place in running it. Joe said, "I'll be happy to do it if you really feel I'm the one." So Parker came to Duke and delivered all the Knapp Fund's pertinent papers to Joe.

When Francis Adler retired (1972), Joe appointed me to take his place, and when Trigve Gunderson retired, he appointed Bill Hughes as his successor. And each of us has appointed someone to succeed us when we retire. This committee has met every year for the last six or seven years at the meeting of the American Academy of Ophthalmology and/or the AOS. On rare occasions, meetings have been called to discuss pertinent affairs on an emergency basis. We discuss not only the money that has accrued but how it should be used. By and large, the money has been used to supplement the funds of the Heed Fellowship Program, especially in funding second-year fellows. This fund supports three or four fellows a year. The corpus at the present time is around a million and a half dollars. It's done a very, very worthwhile job furthering education of residents and fellows. The fund also subsidizes a lecture at the American Academy of Ophthalmology each year.

Member, Board of Visitors, University of Virginia, 1974–1982

Hughes: Dr. Guerry, you were a member of the board of visitors of the University of Virginia from 1974 to 1982, and throughout that time, chairman of the health sciences committee. Please tell me about the board of visitors and how you came to be appointed.

Guerry: This is one of the most interesting things I've ever done. I don't know anything that I have enjoyed more than serving on this board. Mr. Jefferson founded the university in 1819, and the campus was built over a period of some several years there until 1825. He organized the university with the idea that the president would have a group of people whom he called the visitors to advise and consent. This group of people at that time were citizens of the Commonwealth of Virginia.

The board also had the authority to elect the president of the university, who served at their sufferance. In other words, the board was really the power behind the throne. The president was the fellow that carried out the beliefs, tenets, and mandates of the board. In later years, the board of visitors has had members from other parts of the country. The chairman of the board is known as the rector and is selected by the board. Even today, the power that runs the University of Virginia is the board of visitors. If the board has problems with the president, then the president goes, and the board picks a new president. The board of visitors has just recently elected a new president, John T. Casteen, Jr.

A member of the board is appointed by the governor of Virginia for a term of four years and allowed to serve another term if reappointed by the governor. A lot of people say, "Gee, that's a political job." Well, it is a political job to a certain extent, but for the most part, the people that have been on the board have not been appointed for political reasons or as a political gift by the governor. I must say in very recent years, this has not necessarily been true; more politics enters into it now than in past years.

Hughes: As I said, you were chairman of the health sciences committee. Do different board members tend to represent different academic fields on the board?

Guerry: Yes, to a certain extent. This is a loose arrangement. Various members of the board are supposed to have expertise in some particular phase of university life, and that particular one happened to be my field because of my medical background.

Hughes: Anything else about the board of visitors?

Guerry: I think Mr. Jefferson felt that the board of visitors was the single most important organization at the university. The university still today thinks of Mr. Jefferson, as though he were still there with us. The *esprit de corps* of the university really has to do with our love and reverence for Mr. Jefferson and the values that he stood for.

Hughes: So his theories about education are reflected in your policy?

Guerry: No question about that. He was a remarkable man, and whenever we have a gathering at the university, it's always begun with thanks to Mr. Jefferson and wound up with a toast to Mr. Jefferson. Mr. Jefferson lives and breathes there still. I should also mention the very strict honor system run by the students themselves through an honor committee which strictly enforces the honor code.

Honors

DuPont Guerry Annual Lectureship, Medical College of Virginia

Hughes: The next subject is honors. I believe it was sometime around 1981 that the DuPont Guerry Annual Lectureship was established by the Medical College of Virginia. Who was behind that honor?

Guerry: I think that was due to the good offices of Dr. Robert Weinberg, who is professor of ophthalmology at the Medical College, and Dr. Andrew Ferry, professor and chairman of the department. They were good enough to feel that I deserved a bit of attention since I had spent twenty years as professor, and this was their way of showing their appreciation, not only theirs but also that of the department and the Medical College.

I think we had the eighth lecture this year. The first lecture was given by Lorenz Zimmerman. Since that time, we've had top-drawer ophthalmologists who have given the lecture. They are given in Williamsburg as part of the annual postgraduate ophthalmological meeting sponsored by the Department of Ophthalmology at MCV.

The speakers are allowed to choose any subject that they desire. But it usually blends in somewhere or other with the topic that is under discussion at the particular postgraduate meeting, which goes on for three days. These are well attended; at this last one,

we had about 135 people, which is very good for a postgraduate meeting of that sort. Of course, the setting of Williamsburg is a real drawing card.

Hughes: And people come from—

Guerry: They come from all over. At this last one, they were from twenty-five different states.

DuPont Guerry Professorship in Ophthalmology, University of Virginia

Hughes: In 1982, the DuPont Guerry Professorship in Ophthalmology was established at the University of Virginia. How did it come about?

Guerry: I was on the University of Virginia board of visitors for eight years, and I felt that I owed the university a great debt of gratitude. I went through medical school there, interned there for a year, met and married my wife there, and I had real strong ties to the university. The Department of Ophthalmology at the University of Virginia now is a very viable organization, and I had helped recruit the professor of ophthalmology, Brian Conway. I wasn't entirely instrumental in getting him, but I was on the advisory committee and took an active part in his recruitment. He was a protégé of Ed Maumenee and Ed Norton, having worked in both departments.

Brian has done a superb job of organizing the department, but it needed some help. So we decided that we would establish a professorship, and the board of visitors named it in my honor. The funds were given by the DuPont Guerry III Foundation to the university for that purpose. Those funds have accumulated now, and they are taking care of a researcher in retinal disease.

Hughes: Does it have to be retina?

Guerry: It doesn't have to be. The only reason it is at the present time is that Brian Conway's interest is more in retina than anything else. This has to do with basic research. But it's up to the professor to use the funds as he sees fit. There are matching funds from the state, so what our foundation put into it was matched by the state of Virginia dollar for dollar.

Hughes: Has there been, and is there still, a rivalry between the University of Virginia and the Medical College?

Guerry: Yes, there is, but it's been toned down so it's really almost a pleasant type of rivalry. But in past years, it was at times somewhat troublesome, acerbic, and acrimonious.

Hughes: What was the basis for the rivalry?

Guerry: I think it had to do with jealousy. It goes way, way back because the University of Virginia Medical School always considered itself more prestigious than the one at Richmond because it was associated with the University of Virginia. As I've mentioned, the Medical College here in Richmond was first a department of Hampden-Sydney College, which is a much less prestigious school than was the University of Virginia, and also, it was riddled with factions for years and years and years. The University of Virginia felt that it was doing a better job than the Medical College of Virginia, and for many, many years I think it was.

At the present time, both are really very good schools and comparable to the more prestigious ones. I think they can hold their own with any of them. The University of Virginia now is probably doing better from a general standpoint than the Medical College because the Medical College has had some problems recently with losing faculty and not having recruited faculty that should have been recruited.

Hughes: Do you think there's a difference in outlook between the two departments of ophthalmology?

Guerry: At the present time, the Department of Ophthalmology at the University of Virginia is probably doing more basic research and is a bit more prestigious than the one at the Medical College, but both are good.

Howe Medal, 1987

Hughes: In 1987, you received the Howe Medal of the AOS. Was that awarded for any specific work?

Guerry: I think in my particular case it wasn't; it was for a collection of things that I had done. It is probably the greatest honor that has come to me. I sometimes wonder how they happened to pick me, because when you look at the work of most of the people that have received this medal, it seems to me that it certainly outweighs my contributions. Maybe they gave it to me for enthusiasm [laughter], because I've been an enthusiastic ophthalmologist.

Hughes: I suspect that it was a bit more than that. Was there a citation with the medal?

Guerry: Yes, and it states as follows: "Awarded to Dr. DuPont Guerry III in recognition of his distinguished service to ophthalmology, May 1987."

The chairman of the committee, Bill [Guillermo] Pico of Puerto Rico, gave a beautiful speech about my contributions to ophthalmology. It warmed my heart.

The National Eye Institute

Hughes: I was wondering if you were involved in any way in the foundation of the National Eye Institute [NEI], or if you had strong feelings one way or the other about its formation.

Guerry: I was very much interested in it at the time, but I had nothing to do of any importance with that. I was delighted when Dr. von Sallmann went down to NIH from Presbyterian to the then Department of Neurology, which included ophthalmology.* He was to run that phase of it. Then when we were finally able to get a separate discipline going there, Dr. von Sallmann headed it up and did that nobly for some several years. I think NEI has been a great boon to ophthalmology, and it certainly is recognized as one of the great blessings that ophthalmology has working for it.

Hughes: Were you a supporter of the idea for the institute in the mid-sixties?

Guerry: Absolutely. I felt very strongly, and I think nearly everybody in the ophthalmic community did, that ophthalmology should not be a part of the National Institute of Neurological Diseases and Blindness; it needed to be a separate entity, which it is now. I think that was a great step forward, because ophthalmology was getting the hind tit in those days. There's a lot of difference between running your own show and having your own show run for you.

* Dr. Guerry is referring to the National Institute of Neurological Diseases and Blindness.

Medical Care for Blacks, Medical College of Virginia

Segregation

Hughes: Please comment on the treatment of blacks in the early era of your career at the Medical College of Virginia.

Guerry: At the Medical College, blacks were not maltreated or mistreated. They were treated right along with the rest of the patients, and they got just as good care. But at first, they were segregated to a certain extent in the seating arrangements in clinics and in the hospital. However, within several years of my arrival in 1944, that had all disappeared. We never had segregation in our private office.

Hughes: What about in the hospital?

Guerry: When I first got to town, there was very definite segregation in the hospital. The blacks were all in one building. What it amounted to was we had a black hospital. This was true of ob-gyn particularly, and we had a black nursery.

Hughes: How did the facilities compare in the black and white hospitals?

Guerry: The facilities in the black hospital weren't as good, but it didn't take long for that to change.

Research on Retrolental Fibroplasia

Hughes: You told me an interesting story yesterday about the treatment of black and white babies in a study that had implications for retrolental fibroplasia.

Guerry: That is an interesting story. At the time that retrolental fibroplasia (retinopathy of prematurity) had appeared, nobody knew what the causal factor or factors were. There were a whole lot of theories, but none had been proved. As a matter of fact, Dr. Al Reese had done some very interesting work on this condition, using steroids. He was convinced that steroids were helpful and that steroids might very well prevent it or keep it from being the terrible scourge it was. He published a paper to that effect, and very shortly thereafter it was proven that steroids had absolutely no effect on retrolental fibroplasia. Being the great man that he was, he admitted it and said, "I just goofed."

Other researchers had the idea that oxygen had something to do with causing retrolental fibroplasia. There were papers written

stating that too much or too little oxygen did it, and others stating that oxygen had nothing to do with it. The truth of the matter was that nobody knew for sure.

So we thought we'd set up a controlled study. We had a large group of premature black babies, a lot more than we did white babies. We had the idea that maybe oxygen itself had something to do with retrolental fibroplasia, since we had been reading the literature. We gave some of these preemies oxygen, as had always been done, and others only enough to keep them viable. We didn't have as many cases of premature white babies because there just weren't as many white preemies, but we did have a few. I guess the blacks outnumbered the whites by about five to one. But the strange thing was that the whites had a high incidence of retinopathy of prematurity, and the blacks didn't. We couldn't figure out why the whites had a high incidence and the blacks just didn't seem to have it at all.

One day, I was making rounds in the black premature nursery. Now all these babies were supposed to be getting oxygen just the way the pediatricians had ordered it and just as it was ordered for the white preemies. They ordered oxygen whenever the baby was premature because they were worried about whether the child was getting enough oxygen to live on. Well, in any event, I noticed that the oxygen tank had run out. I said to the nurse who was with me, "These babies are not getting any oxygen; I thought oxygen had been ordered by the pediatrician." She said, "Oh, there's no oxygen running there. It must have just run out."

Of course, this was the best thing that could have happened for the babies. We found out that these nurses were very reluctant to start a new canister of oxygen when the first one had given out. As a consequence, these babies really weren't on a steady oxygen diet as were the white ones. Just at the time that we found this out, we were thinking that maybe this was race-related. The reason was that the blacks weren't getting the amount of oxygen it took to cause the problem and the whites were, and it was just at this juncture that oxygen was found to be the culprit. After that, it was used sparingly.

Hughes: These were black nurses?

Guerry: These were black nurses in the black hospital.

Hughes: Why were the nurses reluctant to start a second canister?

Guerry: They had other things that they felt were more important. In retrospect, they were doing the babies a favor.

Luckily, we didn't publish any of this. If this study had continued, we probably would have joined Dr. Reese in deciding the wrong thing about this type of retinopathy. We undoubtedly would have stated that retrolental fibroplasia was probably related to race and much more prevalent in the white race. You can see how our faces would have been red.

Hughes: When the Supreme Court decision on desegregation came along, did it have much impact on medical practice in your area?

Guerry: It did, but not on the clinical side. As soon as the Supreme Court handed down its decision, everything was as of that time desegregated. The hospitals were desegregated and the clinics were desegregated. Of course, a lot of people thought that was a terrible decision.

Holistic Medicine

Hughes: Did your medical education and training place any stress on seeing the patient as a whole?

Guerry: What you call holistic medicine?

Hughes: Well, yes.

Guerry: Not really. I think that concept has been around as long as medicine has been around, but it's been practiced in the past mostly by cults. We weren't really taught holistic medicine; we were taught systemic medicine. We learned system-by-system. I think this holistic concept can be very good, and I think it can be abused. I think it's just another way of teaching medicine. I like the approach we were brought up on where you took one system at a time and you learned all you could about that, and then maybe you'd be in a position to attack it from a holistic standpoint.

Hughes: But the holistic approach wasn't encouraged?

Guerry: No, indeed. We were encouraged system-by-system and service-by-service, in internships and residency. The eye was unto itself, and you didn't really spend too much time trying to figure out how the eye was related to the rest of the body.

Medicare

Hughes: Do you have any comment to make about the impact of Medicare on your practice?

Guerry: Medicare has probably been the greatest disaster from the standpoint of medicine in this country. The concept is fine, but the way that Medicare has evolved has been a disaster for everybody. I think it's been a disaster for the patient, it's been a disaster for the doctor, it's been a disaster for the medical schools, and a disaster for the nation. This may sound foolish because you know we're going to have some kind of national-health-type medicine. But it's not the concept that's bad; it's the way it's been implemented, and I think the implementation has just been downright awful.

I think many physicians in my age group would have continued to practice, but nobody wants to go along with medicine that's practiced the way the government wants you to practice it. I just hate the government telling me how I'm going to run my own show; I wasn't brought up that way. I think the doctors in my generation feel very strongly that the government should not intervene in the doctor-patient relationship. That is a sentiment that we have had from time immemorial; it's almost a religious feeling, the doctor-patient relationship, and to have the government intervening is really a sad situation. If they can't work out a proper rapprochement, it's going to be the ruination of medicine in this country.

Hughes: Do you have any solution?

Guerry: No, I don't. But if this health problem had had more input from the medical community at large and less from the government and some of the academicians, we would be way ahead of the game. But now, Medicare has gotten to be a political football, and when you get anything into politics, you've got a problem.

Problems in Ophthalmology

Hughes: What do you consider to be the major clinical problem in ophthalmology today?

Guerry: Offhand, I would say the biggest problem is not limited to ophthalmology. It concerns medicine in general, that is, government meddling. We do pretty well in ophthalmology, in our training, teaching, research, and everything else. But when

we've got the government messing in there, we've got a problem. I think that's the biggest problem, and not just with medicine, but with everything else.

Hughes: What I was thinking when I asked that question was of a scientific problem that hasn't yet been solved and needs to be solved.

Guerry: Well, I must say that there are problems that haven't been solved as far as corneal surgery is concerned. There's a whole lot of research going on in this subspecialty. On the immediate horizon are computer-controlled lasers for carrying out corneal surgery. We're getting more and more mechanized in ophthalmology.

Optometry

Hughes: What do you think is the proper relationship between ophthalmology and optometry?

Guerry: Don't get me off on that subject. [laughter] Well, there's not anything much that we can do except try to work out an agreement with the optometrists so we can work with them in a friendly fashion. I think we're going to have to work out something like that. But to let them practice medicine and ophthalmology in particular without proper training is a travesty. You can't make optometrists the equals of ophthalmologists by fiat. This is not fair to us and not good for the patient. I would be in favor of their working under our supervision, or else insist that they take the same training we do, in which case, they'd be ophthalmologists. So I don't see that there's any halfway measure.

Hughes: Have you ever worked with optometrists?

Guerry: I've had some real good friends that have been optometrists, but I've really never worked with them. Unfortunately, there has been a group of ophthalmologists that has worked hand in glove with them for pecuniary reasons. "If you refer the patient to me, I'll do the surgery, and I'll send the patient back to you for postoperative care." Which I think is not cricket.

Hughes: Have you been aware of that going on for a long time?

Guerry: Oh, yes, that's been going on for years, surreptitiously at first but wide open at the present.

Hughes: What about in the past?

Guerry: If anything was done, it was done so surreptitiously that none of us knew about it.

Hughes: Was it grounds for being expelled from a society?

Guerry: Oh, yes. As a matter of fact, when I was head of the department, the optometrists came to me and wanted us to give lectures to them. I told them that I just didn't think that was in the cards because I thought they ought to work at the grassroots level to get their people educated. It wasn't up to ophthalmologists to educate them. I thought their suggestion was absurd, so we never did anything about it.

Changes in Ophthalmology

Hughes: Please comment on the changes and advances that you've seen in ophthalmology in your career.

Guerry: It's just extraordinary, the things that have happened. For instance, let's look at what's happened to cataracts, which is a good example of the progress that's been made. When I came along, they were just getting into the intracapsular technique. As a matter of fact, when I started my residency and after the first year was doing a little surgery, and under supervision we were doing cataracts, the first thing they taught us to do was an extracapsular extraction. Then when we had mastered that technique and we were learning to use our hands to greater advantage, they let us go the intracapsular route. Everybody was sold on the intracapsular technique.

As the years went by, progress was made in developing different methods of doing intracapsular extractions. For instance, you'd do an intracapsular extraction using forceps, and then came the erisophake, a little suction cup to pull the lens out that was supposed to be a great improvement over forceps. The next development was an enzyme that would lyse the zonular fibers, and then the cataract could very easily be removed with a cryophake without much trauma. And then came the implants with intracaps and then with extracaps with phacoemulsification and ever smaller wounds, all leading to safer and easier ways of performing surgery. We continue to progress, and, as is right and proper, the patient is the benefactor.

I'm using cataract extraction to show our progress in just one particular phase of ophthalmology. You can take almost any

other subdiscipline in ophthalmology and follow its course, and you find the same sort of scenario. We swing from one sort of procedure, which may be almost an anathema at one time, to something that's sublime at another time, and back and forth. That's human nature and the way we evolve. We hope that we'll evolve in a progressive way, but sometimes there are regressive steps. Periods of ascent are interrupted by sudden periods of descent. Luckily, the periods of descent don't go as far down as the beginning stage of your ascent.

Hughes: So there is forward motion.

Guerry: So there's forward motion, that's exactly right. The proof of the pudding is that if you look back on the forty-odd years that I've been in this particular discipline, you can see how much farther we are ahead right now. Just look at the primitive grafts we did when Ramon Castroviejo first started working with them, and look where we are now in that field.

Entrepreneurism

Hughes: Your comments, please, on the current incidences of entrepreneurism in ophthalmology.

Guerry: Well, it's not just in ophthalmology. It's an all-pervasive thing, not just in medicine but in business and everything else. In ophthalmology, the entrepreneurs have been around for a long, long time. It's gotten to the point, though, where entrepreneurism isn't really frowned on. Many years ago, entrepreneurism really wasn't considered ethical, but today it's not quite the pariah it was.

Hughes: Why do you think there is a loosening of ethical standards?

Guerry: Well, it's all pervasive. It's in the whole warp and woof, the texture, of our present civilization. It's just that the old mores are no longer holding sway. I think it has a lot to do with greed.

Hughes: Do you think that there's anything that organized ophthalmology can do to stop this trend?

Guerry: I think ophthalmology can do its part, but I think it's a national and an international trend, a worldwide trend, really. We should continue to fight for the old beliefs that we were brought up on, that we know made this country great. We should continue to

pull for the things dear to us, dear to our country, and dear to our profession. We must stand up for those tenets.

Hughes: And you have.

Guerry: I've done my little bit. [laughter]

Relaxation

Hughes: What did you do at the height of your career to relax, and how do you relax nowadays in so-called retirement, which is only a relative term. [laughter]

Guerry: I've been a busy person all my life, but I have never let my professional life be my life. If you do, life gets one-sided, and you miss a lot. When I was growing up, I got my relaxation by hunting and fishing. As I've mentioned before, I couldn't do much athletically in high school because of my asthma, but I did as much as I could. In high school, I used to play a little tennis and golf, but I did a whole lot of both after I got rid of my asthma. I've always been competitive in tennis. I never have been exceptionally good at it, but I always try hard and work at it. I enjoy sports.

I've always done a lot of reading, not just in my own particular profession, but general reading. And I love traveling. I'm getting ready to take up golf again. I've always wanted to fiddle around in painting, so I'm taking art lessons.

I'm getting ready to do some volunteer work in some organizations here in town. At present, I'm on the board of Westminster Canterbury Foundation. I'm going to start spending some time with the retirees out there, and I'm sure that will be a mutually rewarding experience.

The Good Physician

Hughes: Dr. Guerry, would you like to tell me what makes a good physician?

Guerry: That's a real hard number, but I think the single most important attribute is compassion, because, after all, that's what medicine is really all about. What you should do as a good physician is to bring the best possible care to your patient. That's what all this training is about. But if you don't have compassion, it really

doesn't mean a whole lot. Compassion is the great tie that binds you and your patients.

I think the other attributes that come into the picture are skill, training, the desire to do research, and getting along with other physicians. This latter sometimes seems to be the most difficult thing that doctors are called on to do. It's been said that if you have one doctor, then you've got a faction. Organizing doctors is like herding cats.

Hughes: What have you most enjoyed in your professional career?

Guerry: What I've really enjoyed more than any other thing is doing a good job in taking care of patients. For instance, I like to take a very difficult case, operate on the patient or treat a patient, and bring sight back to him or her. That's the sort of thing that the patient really considers a miracle. It warms my heart to realize that with the good Lord's help I have been an instrument in healing and in bringing joy to these individuals.

Hughes: Do you have any regrets?

Guerry: By and large, I don't have a whole lot of regrets. I've been pretty well satisfied. I think as an individual, if I had to do it all over, I would very much like to do as I have done.

Hughes: What do you consider to be your greatest contribution?

Guerry: Gee, that's a tough question. I guess probably what meant the most in my life was the work I did on vitamin K and the results of that research, which really seemed to affect so many people. It seemed certain at the time, and it's been borne out since then, that this was a real contribution. I don't think I've done anything since that has equaled it.

The Guerrys at home, 1990

APPENDICES

CURRICULUM VITAE

Name DuPont Guerry III, MD

Date of Birth August 16, 1912

Place of Birth Greenville, South Carolina

Education

Furman University, Greenville, SC, BS, 1934 (Valedictorian)

University of Virginia Medical School, Charlottesville,VA, MD, 1938

University of Virginia Hospital, Charlottesville, VA, Internship, 1938–1939

Manhattan Eye, Ear, and Throat Hospital, New York, NY, Otolaryngology Residency, 1939–1941

Snyder Ophthalmological Foundation Grant, Presbyterian Hospital, Columbia University, New York, NY, Research Fellowship, 1941–1942

Institute of Ophthalmology, Presbyterian Hospital, Columbia University, New York, NY, Ophthalmology Residency, 1941–1944

Columbia University, New York, NY, DMedSc, 1944

Professional Experience

Professor Emeritus, 1973–present; Professor and Chairman, 1953–1973, Department of Ophthalmology, Medical College of Virginia

Private Practice of Ophthalmology, Richmond, VA, 1944–1988

Associate in Ophthalmology, 1948–1953; Instructor, 1944–1948, Medical College of Virginia

Researcher in Glaucoma, Presbyterian Hospital, Columbia University, 1951

Editorial Board Member, *American Journal of Ophthalmology*, 1965–1981

Member, Board of Visitors and Chairman, Health Sciences Committee, University of Virginia, 1974–1982

Board Member, Richmond Eye and Ear Hospital Authority, 1980–1988

Honors/Lectureships/Tours

John Shelton Horsely Memorial Prize, University of Virginia, 1940. The Etiology, Diagnosis and Therapeusis of Abnormal Bleeding in the Newborn – Vitamin K.

Honor Guest and Lecturer, 25th Class Reunion, University of Virginia Medical School, 1963

Lecture and Conference Tour, International Eye Bank prior to Planning World Conference on the Cornea (Honolulu, Tokyo, Taipei, Bangkok, Singapore, New Delhi, Athens, and Cairo), 1963

DuPont Guerry III Annual Lectureship. Established 1981 by Medical College of Virginia, Richmond, VA.

DuPont Guerry III Professorship in Ophthalmology. Established March 1982 by University of Virginia, Charlottesville, VA.

Membership Societies

American Academy of Ophthalmology (Vice-President, 1981)

American Board of Ophthalmology (Diplomate, 1944; Board Member, 1970–1978; Chairman, 1978; Consultant, 1980–1983)

American College of Surgeons

American Medical Association

American Ophthalmological Society (Council Chairman, 1979; President, 1984–985)

German Ophthalmological Society

Institute of Ophthalmology, Presbyterian Hospital, Alumni Association (President, 1967)

Instituto Barraquer

Gonin Club

Knapp Fund Committee

Medical Society of Virginia

National Society for the Prevention of Blindness

Pan-American Ophthalmological Society

Pan-Pacific Ophthalmological Society

Richmond Academy of Medicine (President of Ophthalmology and Otolaryngology Section, 1960)

Southern Medical Association

University of Virginia Medical Alumni Association (Member, Advisory Board, 1963–1967; President, 1968–1969)

Virginia Society for the Prevention of Blindness

Virginia Society of Ophthalmology and Otolaryngology (President, 1966–1967; Council Chairman, 1969)

Honorary and Social Fraternities

Alpha Omega Alpha

Kappa Alpha

Phi Beta Pi

Raven Society

Sigma Xi

Other

Block Island Club (Co-founder)

Bull & Bear Club (Former member)

Colonade Club, University of Virginia

Commonwealth Club

Country Club of Virginia

Deep Run Hunt Club (Former member and board member)

Huguenot Society, South Carolina

St. Stephen's Episcopal Church (Past vestryman)

Westminster Canterbury Foundation Board

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INDEX

A

B

C

D

E

F

G

H

L

M

N

O

P

L

M

U

V

W

XYZ